

3-D Imaging Past & Present

March/April 2011
Volume 36, Number 5



A Publication of
National
Stereoscopic
Association, Inc.

STEREO WORLD

Deep Snow

**A.C. McIntyre
in the Thousand Islands**

Water Vapor Gives Storms Depth



'50s Flavored Finds

A taste of the late '40s through the early '60s found in amateur stereo slides

by Mark Willke

Party in the Barn!

This group of images from a View-Master Personal reel apparently captured some sort

of celebration taking place in what appears to be a whitewashed barn interior. But the attendees aren't dressed in casual farm attire, and in fact they appear to be dressed as

nicely as one would expect at a party held in someone's house. I'm surprised the guests were willing to lean against walls and sit on flat surfaces in the barn with their nice clothes on, but they don't appear to be too concerned. It is not clear in any of these images (or others on the same reel) if there were any farm animals present for the party, but I kept expecting to see a cow in the background, mingling with the other party-goers!

The Personal reel is unlabeled, so the photographer is unknown, as is the date they were taken and the location. And of course, that means the piece of information that I'm most curious about—the whole reason for the event—is also still an unexplained mystery.

I'm guessing that there was no place to brew-up some coffee for the evening in the barn, since there are several Thermos bottles on the shelves. It's lucky those shelves were available, to be used as a food serving counter! ☕



This column combines a love of stereo photography with a fondness for 1950s-era styling, design and decor by sharing amateur stereo slides shot in the "golden age" of the Stereo Realist—the late 1940s through the early 1960s. From clothing and hairstyles to home decor to modes of transportation, these frozen moments of time show what things were really like in the middle of the twentieth century.

If you've found a classic '50s-era image that you would like to share through this column, please send the actual slide or a high-resolution side-by-side scan as a jpeg, tiff or photoshop file to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206. You can also email the digital file to strwld@teleport.com. If the subject, date, location, photographer or other details about your image are known, please include that information as well.

As space allows, we will select a couple of images to reproduce in each issue. This is not a contest—just a place to share and enjoy. Slides will be returned within 6 to 14 weeks, and while we'll treat your slide as carefully as our own, Stereo World and the NSA assume no responsibility for its safety.

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National Stereoscopic Association, Inc.



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March/April 2011

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P.O. Box 86708, Portland, OR 97286

Questions Concerning

Stereo World Subscriptions
P.O. Box 86708, Portland, OR 97286
e-mail: strwld@teleport.com

Stereo World Editorial Office

(Letters to the editor, articles & calendar listings)
5610 SE 71st Ave., Portland, OR 97206
(503) 771-4440
e-mail: strwld@teleport.com

Stereo World Advertising

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5610 SE 71st Ave., Portland, OR 97206
(503) 771-4440
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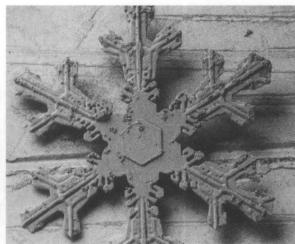
Stereoscopic Society of America

(Affiliated with the National Stereoscopic Association)
Les Gehman, Membership Secretary
3736 Rochdale Dr., Fort Collins, CO 80525
(970) 282-9899
e-mail: les@gehman.org

Stereo World on the Web

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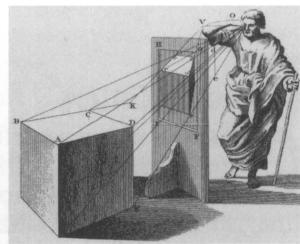
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Front Cover:

Cyclone Yasi hits Queensland, Australia in February, as seen in a depth mapped water vapor image converted to 3-D by Charles McCreery as part of his article "3-D Conversion of Satellite Water Vapor Imagery" where this anaglyph is presented as a stereo pair. 2D- image courtesy of Cooperative Institute for Meteorological Satellite Studies, Space Science and Engineering Center, University of Wisconsin-Madison.

Back Cover:

A.C. McIntyre No. 52, "Nobby" shows the steam yacht of that name, on which the photographer traveled around the Thousand Islands area of the St. Lawrence River making the stereoviews that appear in "A.C. McIntyre - First Photographer of the Thousand Islands" by Tom French. His book River Views - A History of the 1000 Islands in 3D will be published in May.

The National Stereoscopic Association is a non-profit organization whose goals are: to promote research, collection and use of vintage and contemporary stereoviews, stereo cameras and equipment, and related materials; to promote the practice of stereo photography; to encourage the use of stereoscopy in the fields of visual arts and technology; to foster the appreciation of the stereograph as a visual historical record.

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Annual membership dues: \$32 third class US, \$44 first class US, \$44 all international memberships. Annual memberships include six issues of *Stereo World*, a plastic lorgnette viewer, and a membership directory.
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EDITOR'S VIEW

Comments and Observations

John Dennis

Moisture Matters

Considering the severity of the winter of 2010-11, this issue's articles on Water Vapor Imagery of storms by Charles McCreery and "Studying 'Snowflakes' in 3-D" by William Wergin are more than a little appropriate. We could claim that we delayed this issue a bit in the considerate hope that the harsh weather would be over by the time you get it, but that would be stretching things. Warmer oceans and air will just keep providing more water vapor for dramatic images like our current cover shot of massive Cyclone Yasi over Australia in February. Changing seasons, jet streams etc. will move the added moisture around but it's got to go somewhere, and the sometimes extreme results will continue providing opportunities for stereoscopic documentation from on the ground as well as from above.

Digital Deluge Sweeps On

Two things once important to stereo photography vanished at the end of 2010. Most well noted was of course the final processing of Kodachrome film, production of which had ended in 2009. (The March/April issue of *American Photo* includes images from the last roll manufactured and one from the last roll to be processed.) Of less impact on general photography but significant to stereographers around the world was the end of production of RBT stereo film cameras as of January 1st, 2011, covered in NewViews in this issue.

For most of the past 20 years, these heavy but marvelous spliced rigs had been on wish-lists of stereographers everywhere, generally dependent on a winning lottery ticket. But there was a sort of chilling inevitability to the end of the RBT, given the speed and inertia of the digital revolution that engulfed and carried away all but the most determined defenders of film's superiority over perceived pixel

puffery. The announcement inspired relatively brief discussion on the internet about what, just a few years ago, would have been a major upset in the world of 3-D photography.

Now, new digital 3-D cameras or camcorders from major corporations seem to be introduced every couple of weeks, as if the flood-gates of a waiting 3-D torrent had been opened. The first 3-D smartphone camera, as seen in NewViews, may be just the beginning of yet another wave in that inundation. The sheer number of digital 3-D cameras will soon (if it hasn't already) surpass the world total of stereo cameras made from 1847 to 2007. (The number that will take longer to catch up will be the total inches of lens separation on all the new cameras despite the

best efforts of Fujifilm.) Clearly, quantity isn't quality, but the growing media promotion of new 3-D cameras will at least make shooting your own stereoscopic stills or videos a less alien thought for the general public. The challenge for members of the NSA, ISU and local 3-D clubs will be to demonstrate as widely as possible just how astounding the best stereography really can be, whether via film or digital means.

A Sense of Renewal

About 2/3 of the NSA membership received renewal letters last month, and the enthusiastic response has been gratifying and encouraging. If you had reached "02" issues remaining on your address label but fear the dog may

(Continued on next page)

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LETTERS

Reader's Comments and Questions

James Esson

I enjoyed Richard Ryder's article outlining the elephants that resided in the Philadelphia Zoological Gardens and it was nice to see that the work of a Canadian photographer, James Esson, was included in his illustration. However, there is one small correction that should be noted about James Esson—he worked out of Preston, Ontario and not Montreal as stated by Mr. Ryder.

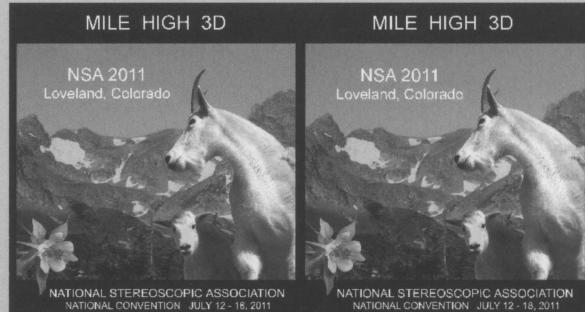
Preston was a small town, now part of the city of Cambridge, about 60 miles west of Toronto, Ontario. James Esson was a very productive photographer and he produced many series of stereo views. In Ontario, he published separate series of views of the Northern Lakes of Canada, Toronto, Hamilton, Ottawa and other smaller communities. One of his series was of the Thousand Islands which included many views on both sides of the Canada-US border. The view illustrated by Mr. Ryder was from Esson's "Series of Views on the Lehigh Railway" that

included views of many places that were along the railway as listed along the right side of the card shown in Mr. Ryder's illustration. Most of these series were originally published on cabinet sized cards. However, later Esson republished

many of his views on regular sized cards in two series "Picturesque Canada" and "Picturesque America."

Robert G. Wilson
Toronto, ON, Canada 

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Editor's View

(Continued from previous page)

have consumed the letter, or that it was in that postal van still lost in the snow, don't worry. We'll send reminder cards long before your membership expires!

Corrections

The last named individual in the photo on page 11 on *Stereo World* Vol. 36 No. 4 is actually SCSC vice-president James Staub and not Michael Snow.

In the article on Charles Lyman Pond in Vol. 36 No. 2, the assertion that Pond made two trips to Yosemite (in 1871 and 1872) is incorrect, and was based on an apparent error in note taking from a hotel registry by some earlier researchers. Pond only visited Yosemite in 1871 

GONE MADDD



by AARON WARNER
3-D by Ray Zone

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Studying “Snowflakes” in 3-D

by William P. Wergin, Ph. D.

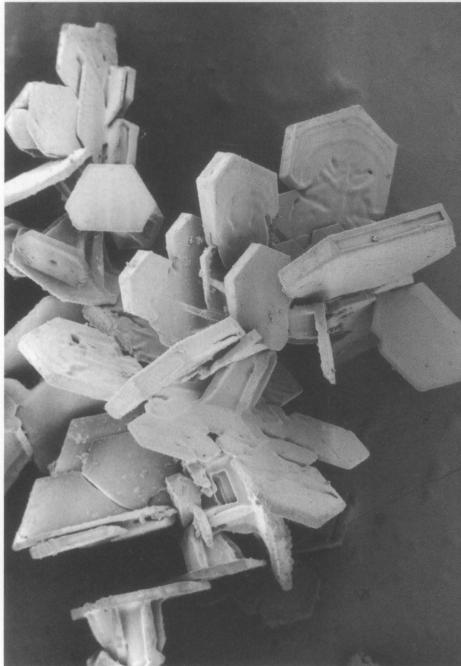


Fig. 1.
Snowflake consisting of several types of snow crystals including hexagonal plates, short tapered columns and a dendrite, which caps a column. 35X.

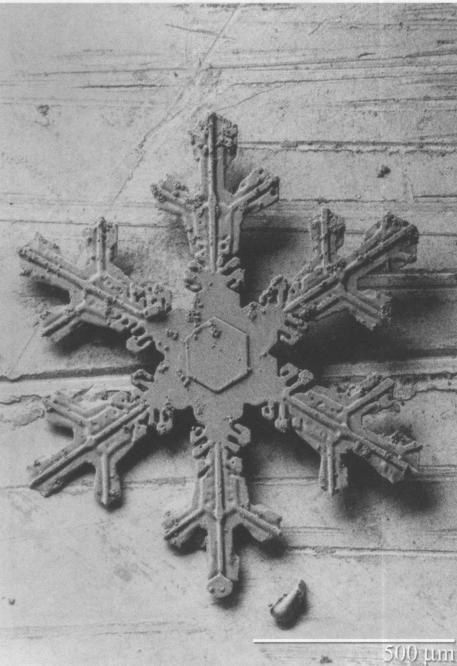
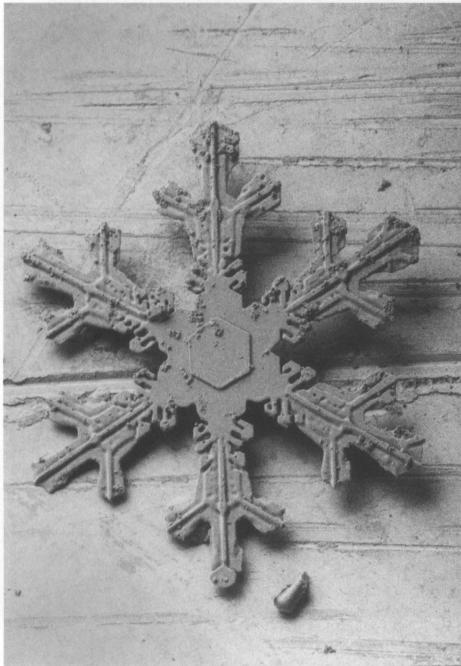


Fig. 2.
Hexagonal dendrite whose six arms exhibit similar branching and structural features. A small hexagonal plate can be observed in the center of the crystal. 50X.

Have you ever seen a “snowflake” in 3-D? Do you know what a snowflake really looks like? These are a couple of questions that this article hopes to address.

Technically, a snowflake is an aggregation of smaller particles called snow crystals. Snow crystals are formed in the atmosphere when water vapor is directly transformed into a solid, known as a snow crystal, without going through a liquid phase. The process is similar to the way in which frost forms in your freezer. As the individual snow crystals descend through the atmosphere, they may collide and combine into more complex structures that we generally refer to as snowflakes (Figure 1).

Snow crystals are not the symmetrical, eight-armed “snowflakes” that are frequently depicted around ski resorts or woven into sweaters. True snow crystals are hexagonal; therefore, they are correctly depicted as having six arms (Figure 2). This relatively flat, two-

dimensional snow crystal, which most of us are familiar with, is technically known as a stellar dendrite. We owe our familiarity with stellar dendrites to Wilson Bentley, a Vermont dairy farmer who spent much of his life photographing snow crystals with a light microscope. Because Bentley was intrigued with the beauty of nature and confined to the limitations of a light microscope, he concentrated on this class of two dimensional, hexagonally symmetrical snow crystals. In 1932, many of his photographs were published in the book *Snow Crystals* (Bentley, W. A. and W. J. Humphreys, Snow Crystals. McGraw-Hill, 1931), which is still in print today (Dover, 1962). The book contains photomicrographs of over 2400 snow crystals most of them illustrating variations of the stellar dendrites. This book has served as a source of information for illustrators and artists who have "molded" our idea that "snowflakes" consist of these hexagonal six armed crystals.

But do all snow crystals consist of stellar dendrites? Not at all! An international committee has devised a classification system that is widely used among scientists today. This system recognizes eight types of precipitation particles. In addition to stellar dendrites, the system includes columns, plates,

Fig. 3.
Hexagonal plate whose surface is smooth. Lower right edge exhibits slight indentation.
125X.

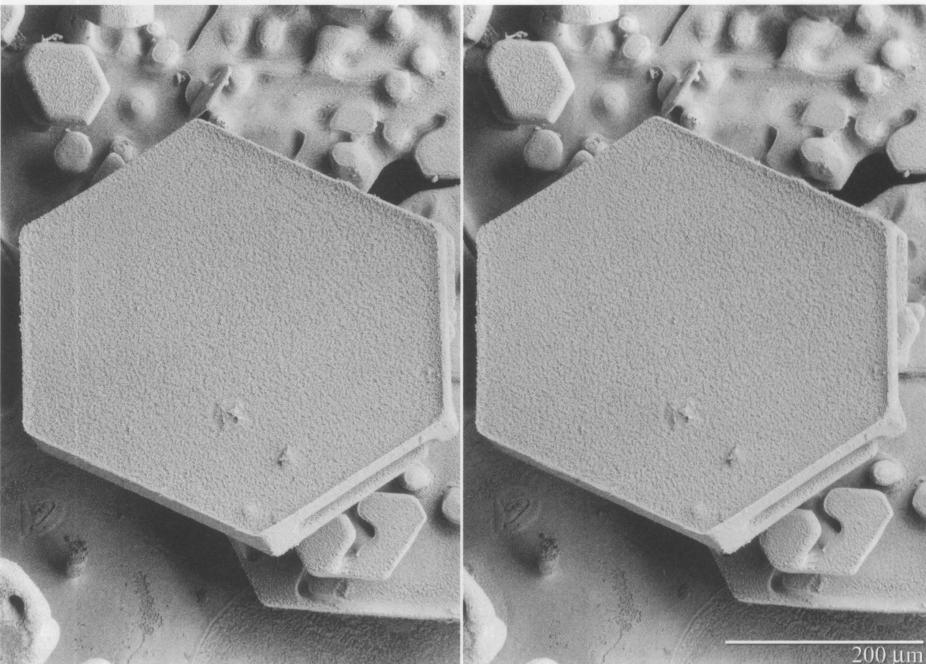
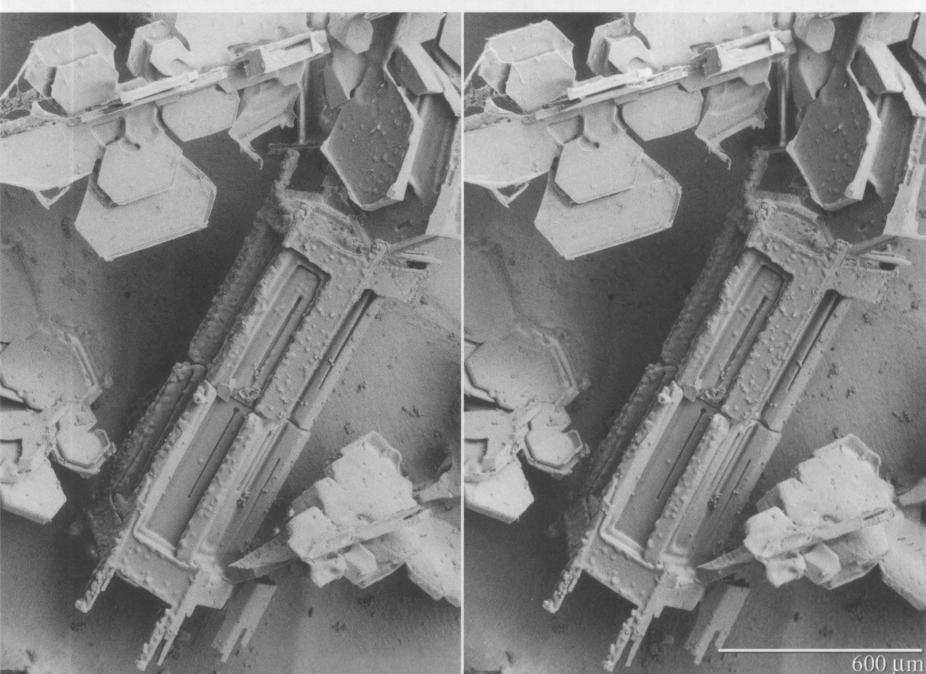


Fig. 4.
Tapered columns joined at their apices. Each column is capped with a hexagonal plate. 40X.



Fig. 5. Single column whose ends are capped with hexagonal plates. The sides of the column are not flat but exhibit layers or steps. Some riming exists on the surface of the crystal.
40X.



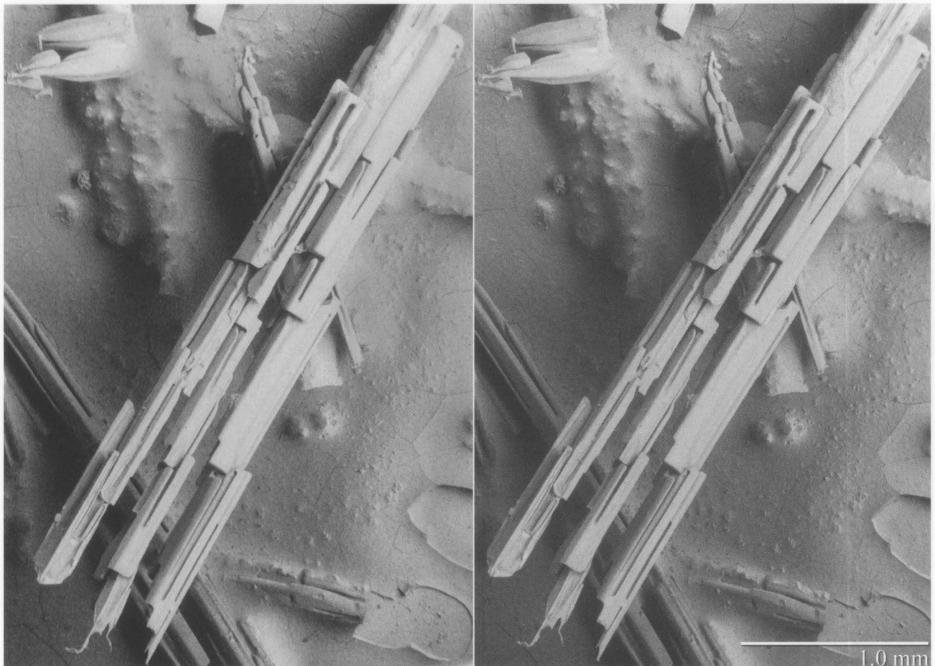


Fig. 6. Group of needles. Needles generally do not exhibit sharp edges or smooth surfaces. 25X.



Fig. 7. Aggregate consisting of hundreds of irregular crystals. 120X.

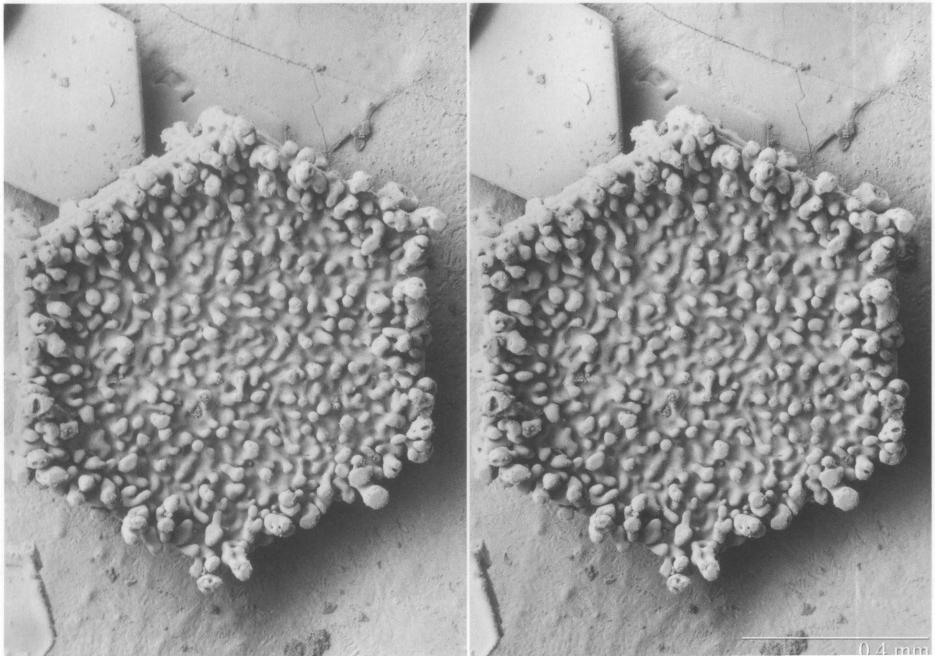


Fig. 8. Hexagonal plate whose surface is rimed. Rime consists of cloud droplets which freeze to the surface of descending crystals. 60X.

irregular crystals and graupel. Until recently, structural details of these crystals could not be observed with a light microscope because the limited depth of field (depth of focus) made photographing crystals having significant 3-D topography nearly impossible. Furthermore, to avoid melting, re-crystallization or sublimation, the snow crystals had to be observed in laboratories maintained at -35° to -45°C.

The limitations of the light microscope have recently been overcome by a new technique called low temperature field emission scanning electron microscopy (LTFESEM). This technique employs a cold stage that is mounted inside a scanning electron microscope to maintain the temperature of a frozen specimen at -196°C. At this temperature melting, re-crystallization and sublimation are prevented. In addition, the LTFESEM can magnify a specimen more than 50,000 times and the depth of focus is nearly 1,000 times greater than that of a light microscope. Furthermore, the microscope has a stage that allows the operator to tilt the frozen specimen between successive photographs. As a result, two images that contain the parallax information needed for true 3-D viewing can be recorded.

Recently, this technique has been used to observe and study the structural features of the different types of snow

crystals that could not be properly resolved with the light microscope because of their topography. For the first time, detailed structure of these crystals can now be resolved and viewed in 3-D.

The snow crystals that most of us are familiar with are the stellar dendrites. They have six arms that may occur as broad flat branches or as delicate complex extensions. The six arms, which are generally identical to one another, result in hexagonal symmetry (Fig. 2).

A simpler type of snow crystal is the hexagonal plate (Fig. 3). The plates are also relatively flat, symmetrical and vary from 0.08 to 0.1 mm in thickness and from 0.6 to 1.2 mm across. Plates occur as single crystals but have been observed as extensions on stellar dendrites and as caps on columns.

Several types of columns can be observed with this technique. They can occur in groups of four that are joined at their tapered ends or apices; whereas the opposite ends are frequently capped with hexagonal plates (Fig. 4). Single un-tapered columns, which are capped on both ends with plates, are also commonly found (Fig. 5).

Snow crystals called "needles" generally occur in bundles but do not exhibit the sharp edges and symmetry that

Fig. 9. Graupel particle consisting of an aggregation of frozen cloud droplets. 25X.

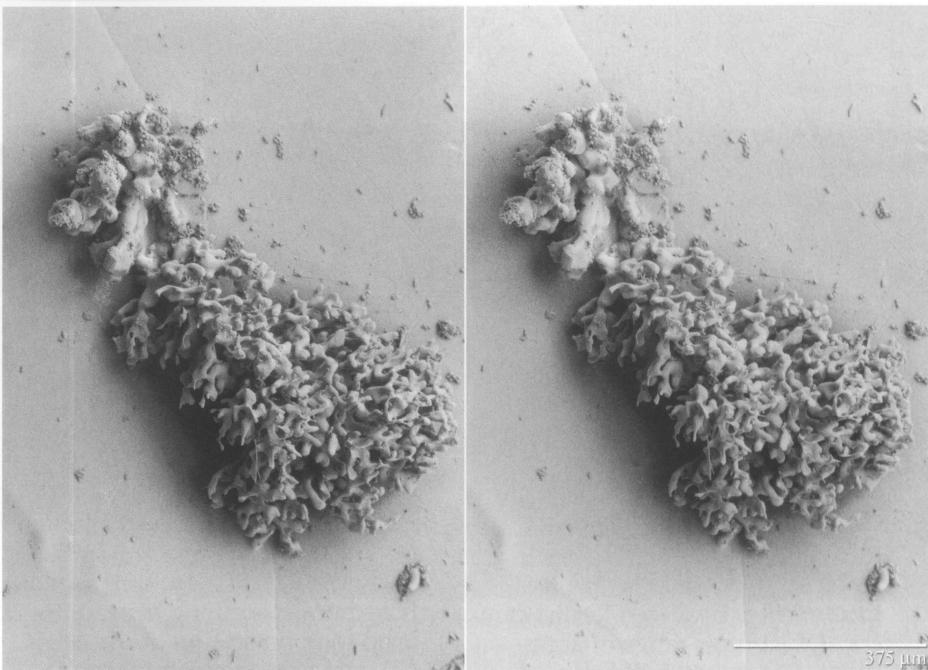


Fig. 10. Early stage of metamorphosed crystals that occurred when a snow pack is subjected to a temperature gradient. The edges of the crystals lose their sharp crystalline features and become rounded and bonded to neighboring crystals. 50X.

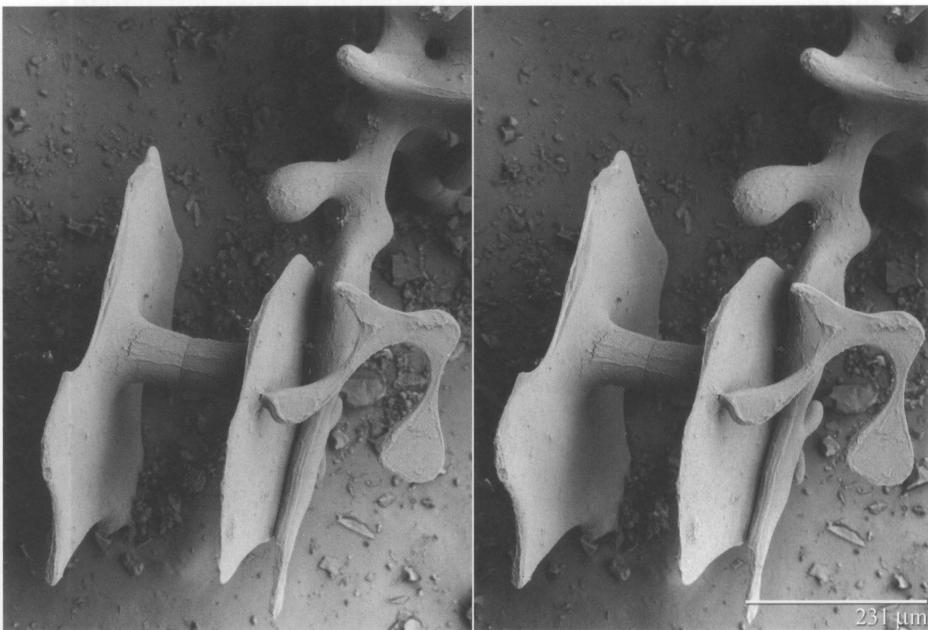
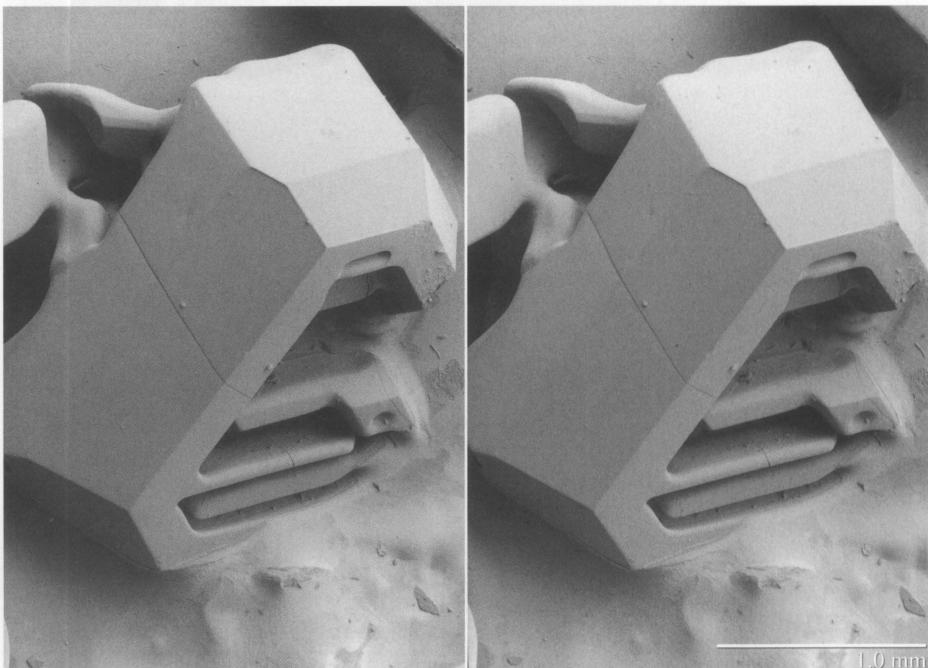


Fig. 11. Large depth hoar crystal that formed at the base of a snowpack that was subjected to a large ascending temperature gradient. The faceting that occurs is a characteristic of this type of crystal. 30X.



(Continued on page 31)

Ron A. Zakowski

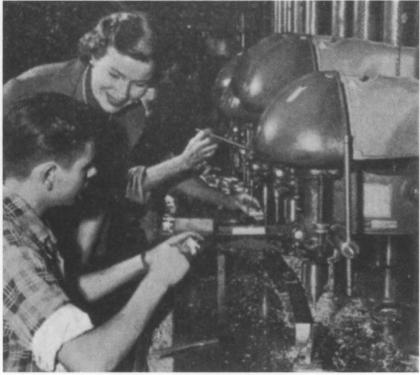
1933-2011

Ron A. Zakowski, long-time authority of all things Stereo Realist, died January 24, 2011 at the age of 77. He is survived by his wife Betty, three children and seven grandchildren.

Ron worked for the David White Company—originally known for manufacturing quality surveying equipment but later known for introducing the Stereo Realist camera and its huge range of accessories—for nearly half a century, and possessed an encyclopedic knowledge of the company's history and products. As the production of the Realist camera slowed in the late 1950s and early '60s, the company contracted with Ron to personally build batches of the cameras, including many of the model 1050 "Custom" cameras.

When the company eventually decided to discontinue the Stereo Realist line, Ron convinced those in charge to sell him the entire remaining inventory of parts, along with all the original factory adjustment and calibration rigs and tools used to work on the Stereo Realist line, so that he could

The October 1952 issue of The Realist News included this photo as part of the coverage of the September 1952 visit to Milwaukee by Nancy Olson, otherwise known as "Miss Three Dimension". The brief caption for this particular shot relates that Nancy is "...seeing Realists made". Ron Zakowski revealed to me during one of our visits that he is the young man included in this photo, demonstrating some machining process at the David White Company factory to Nancy Olson!



continue to repair and restore the abundance of cameras and accessories that had been sold since the camera's introduction in 1947. Ron once told me that the company had originally planned to haul everything to the landfill, and he really had to twist some arms and put together a convincing proposal before he was allowed to personally acquire everything instead. He even took possession of the original engineering blueprints and other paperwork related to the Stereo Realist line, and when the company decided to change its name from Realist back to its original David White Company name, Ron acquired the large lighted Realist sign from the outside of the building after it was removed!

He offered a Realist repair service out of his home for many years, and the combination of his inventory of original parts, the original tools used in the repair process and Ron's detailed knowledge of every procedure that might be needed to restore equipment to like-new condition essentially allowed "original factory repair service" on Realist gear for many years after the original factory no longer had anything to do with stereo. His years of experience in the manufacture and machining of parts later came in very handy when his supply of certain frequently needed parts began to run low. When necessary, he contracted to have additional inventory custom-manufactured so that he could continue making the repairs that required those particular parts.

Besides being in the business of building and repairing Realist equipment, Ron also enjoyed using it to make his own stereo slides. He mentioned to me that he had captured much of his family's activities in stereo through the years. In fact, he also said a couple of times that he wanted to send me some of his own slides to be used in my Fifties Flavored Finds column in *Stereo World*, as he had some particular ones in mind that he thought would be fun to share

there. I looked forward to receiving them, but I'm sad to report that he apparently never got a chance to dig them out and send them.

It seemed to me that Ron's deep knowledge of Stereo Realist equipment and its history somehow needed to be at least partially preserved. This eventually led to me work with him in creating two extensive *Stereo World* articles covering the Realist Custom camera (Vol. 19, #2) and the Realist Macro Stereo camera system (Vol. 23, #1).

I first met Ron in 1987, when he invited my wife and I to stop by his home in Berlin, Wisconsin as we passed through the area on a summer roadtrip vacation. I still chuckle when I recall the first moments of our initial meeting. Ron's wife Betty had greeted us at their door and invited us inside. She gestured to a nearby interior doorway and mentioned that Ron would be right there. I mistakenly thought that she was instructing me to go through the door to wait for him, so I headed that way. As I entered the next room, I almost crashed right into Ron, who had just arrived at the door himself from the other side. He was just starting to pull on a shirt, which he had apparently removed to stay cool on that summer day, so I suddenly found myself nearly colliding with a large man who was naked from the waist up! After getting over my embarrassment, we had a wonderful visit, which included an extensive tour of his basement workshop. He demonstrated calibration equipment, pulled out original blueprints, related numerous Realist stories and anecdotes, and even made a minor repair to my Realist Film Identifier as I watched. After that first visit, I often wished I lived closer to Ron, as it seemed he could probably fill many evenings or weekends with interesting stories and stereo discussions!

My wife and I were once again driving through Wisconsin in 1992 when Ron and Betty invited us to stay overnight at their recently

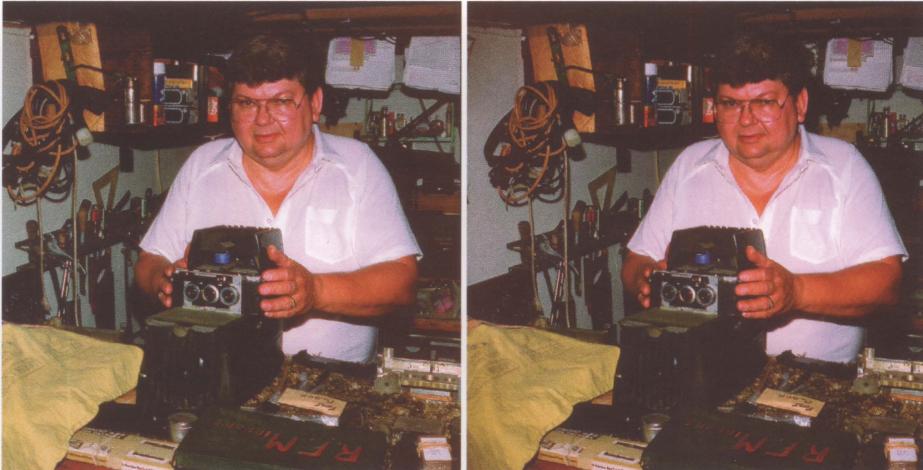
constructed log home near Wautoma. While we were there, Ron gave me a tour of the nearby David White Company facility, which by that time was completely out of the stereo business and was only making surveying equipment, but it was still a thrill to take a look around behind the scenes in one of the company's buildings.

In 2003 I found myself on yet another family road trip through Wisconsin (I have relatives there), and had been covering our travels in stereo as usual, when suddenly the main shutter spring on my Realist snapped, rendering the camera completely non-functional. We had not arranged a visit with Ron on this trip, but I somehow tracked down his number, gave him a call from our hotel in Madison, and managed to get him on the line. I explained my situation, and he told me to come on by his house for a repair. We were a couple of hours away from him, but I couldn't see continuing our trip without a functioning stereo camera, so we made a detour to Wautoma. After we descended into his basement workshop, he located his batch of shutter springs and got right to work. My camera was soon back in operation, so that the stereo record of our trip could continue. Of course, although the repair itself was fairly quick, we still had to have a long stereo discussion during the process, so my family didn't get back on the road until much later in the afternoon!

After many years of repairing stereo equipment, Ron eventually grew weary of keeping up with the numerous repair requests that continued to pour in entirely through word-of-mouth (as he had not advertised his services for many years). His legs had been giving him trouble, making it difficult for him to go down the stairs to his basement workshop. He finally declared a couple of years ago that he was no longer in the repair business, and seemed happy to be free of the responsibility.

He called me a couple of times out of the blue since then, just to chat, and we always had a good stereo discussion. I sometimes felt we should team up again to create another *Stereo World* article, but it never happened. I will miss him.

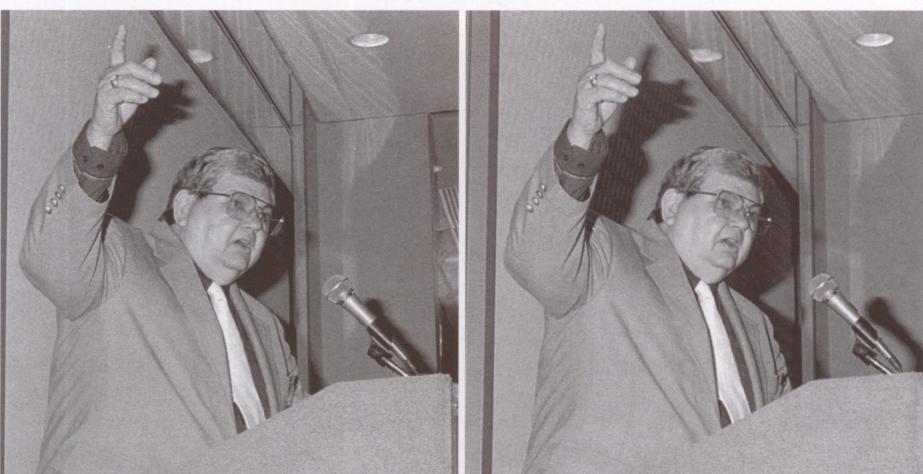
-Mark Willke 



Ron Zakowski demonstrates a factory camera test rig that had originally been created from a Realist projector. This shot was taken August 11, 1987, in Ron's basement workshop at his home in Berlin. The fact that he had obtained all of the original factory alignment and test equipment along with all remaining original parts allowed him to make repairs of a quality one would normally only expect from the original factory. But because Ron actually built many of the later cameras in his home shop, he almost was the original factory! (Stereo by Mark Willke)



Betty and Ron Zakowski pose on the front step of their recently completed log home near Wautoma, August 19, 1992. (Stereo by Mark Willke)



Ron was keynote speaker at the 1994 NSA convention in Milwaukee, Wisconsin, where he related many stories and experiences from his years with the David White Company. He even brought along the Realist sign that had recently been removed from the exterior of the company's building to be exhibited at the convention. (Stereo by John Dennis)

WAGONS OF THE GREAT CIRCUS PARADE

by Peter Jacobsohn

After a 6 year's absence, the Great Circus Parade returned to Milwaukee, WI in July 2009. The parade is a re-creation of the caravans of wagons of the 1800s and early 1900s that brought the circus to many communities across America.

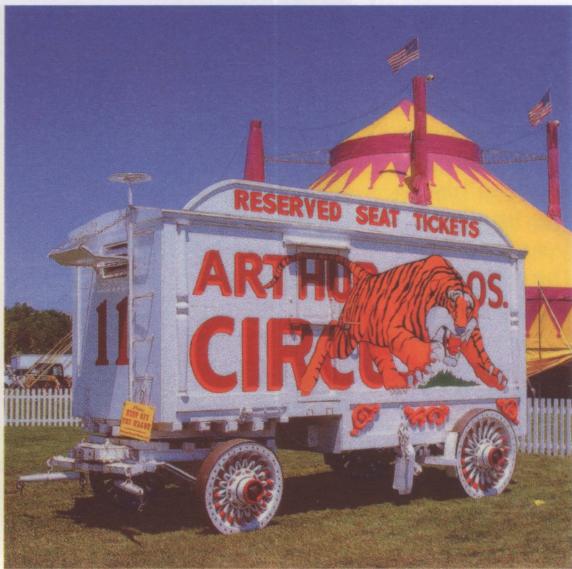
The parade had been a yearly event for close to 40 years with some interruptions when sponsorships became an issue. The majority of the parades took place in Milwaukee with a few also held in Chicago, IL and Baraboo, WI. The 2009 parade was one of the longest

in the history of the parade. It featured 126 individual units, 30 of which were bands with 1050 musicians, 450 horses, 2000 costumed participants and over 50 antique circus wagons.

For purposes of this article I will concentrate on the unique circus



Al G. Barnes Elephant Tableau. This tableau wagon was built for the Al G. Barnes Circus which used it from 1921-1926. Six grey Percherons pulled the wagon.



This Arthur Bros. Ticket Wagon began its service as a baggage wagon in the 1930s and was converted to a ticket wagon in 1934. Circus World Museum acquired it and restored it in 1963. The charging tiger always attracted a great deal of attention.

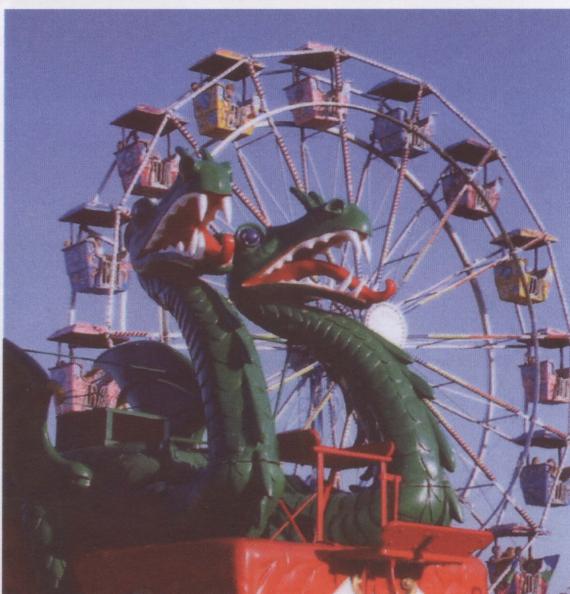
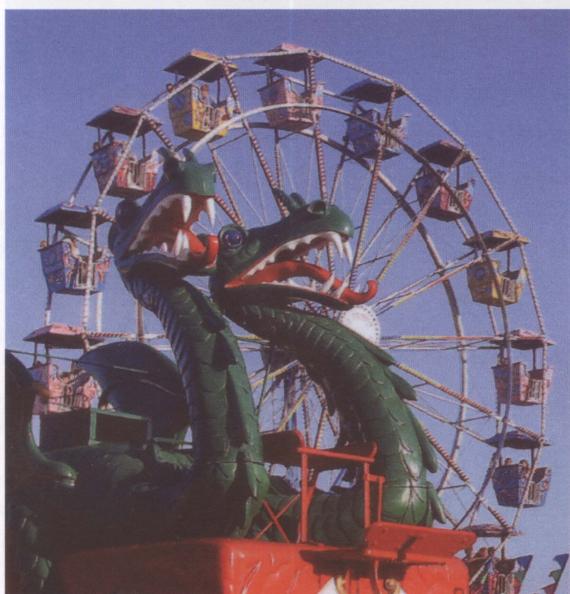
Christy Bros. Beauty Tableau. Originally a cage wagon, it dates back to 1883. Once owned by Ken Maynard and Disney Studios, it was transformed to a wardrobe and baggage wagon.



The "Cinderella" Pony Float was one of seven fairy tale themed pony floats constructed in the 1880's. Only two others survive. All are owned by the Circus World Museum. In the 2009 parade the "Cinderella" float was pulled by four Sorrel Welsh Ponies.



"Golden Age of Chivalry" Tableau. Built in 1903 as a parade vehicle it was first used by Barnum & Bailey and later by the Ringlings. A team of six horses pulled it.



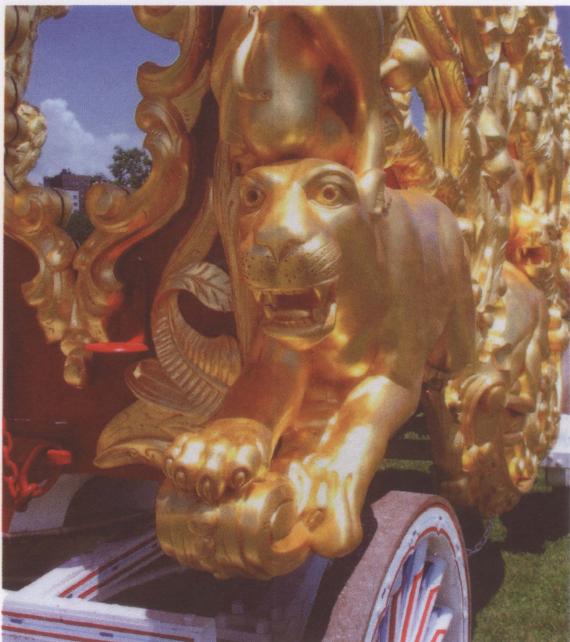
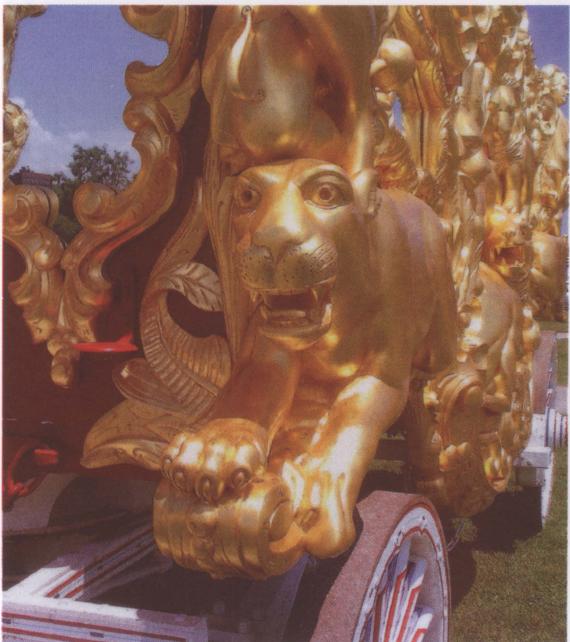
wagons. In the 2009 parade the lightest wagon weighed 1120 pounds and the heaviest weighed 18,510 pounds. The Circus World Museum in Baraboo, WI owns two

thirds of the circus wagons known to exist. Most are antique and have been painstakingly restored by highly skilled workers at the museum. The wagons included in the

parade are transported from the museum to Milwaukee where they are put on display for several days prior to the parade.



This Hagenbeck-Wallace Tableau wagon was built in 1905 and served as a bandwagon for the Carl Hagenbeck Wild Animal Show through 1925. It was also known as the Lion's Bride Tableau.



The Ringling Bros. Lion Tableau is perhaps the most striking of the wagons since its paint scheme is covered in gold leaf. The Lion Tableau was built about 1880 for the Adam Forepaugh Circus. It was donated to the Circus World Museum in 1961 and underwent a complete restoration in 2000. In the 2009 parade it functioned as a band wagon and was pulled by eight Black Shires.

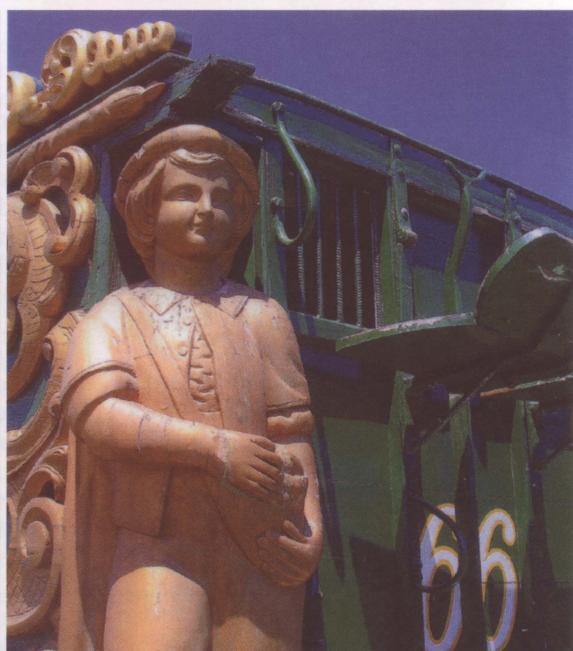


Royal Italian Band Carriage. This type of carriage appeared in British circuses as early as 1879. It was found in deteriorated condition on a farm in England in 1968.

The Barnum and London Tableau Cage No. 66 dates to 1883. It participated in circus parades in Europe and the United States until 1918 and was used by Barnum and Bailey and the Ringling Brothers circuses. In 1959 it was acquired by the Circus World Museum and restored to its original appearance.



Front detail, Barnum and London Tableau Cage No. 66.



For the 7 decades ending in 1870 all American circuses traveled by wagon. The wagons carried all the essential elements needed to bring the circus performers from town to town. They were pulled by teams of horses ranging from ponies for small wagons to strong Belgians and Percherons for the largest and heaviest wagons. Some circuses continued the use of wagon shows until WWI and a few lingered until 1929.

Although the main attraction for the villagers and farmers visited by the circuses was the performance, parallel attractions were the wagons and the caravan or parade of which they were a part as they

came into town to set up. Circuses developed a wide variety of specialized wagons for their overland moves. Cage wagons with glass or iron bar sides contained the animals, be they lions, hippos, giraffes or the smaller monkeys and snakes. There were ticket wagons, band wagons, cookhouse wagons, calliopes, baggage wagons and wagons that carried the canvas and poles and other equipment needed to erect the circus tents.

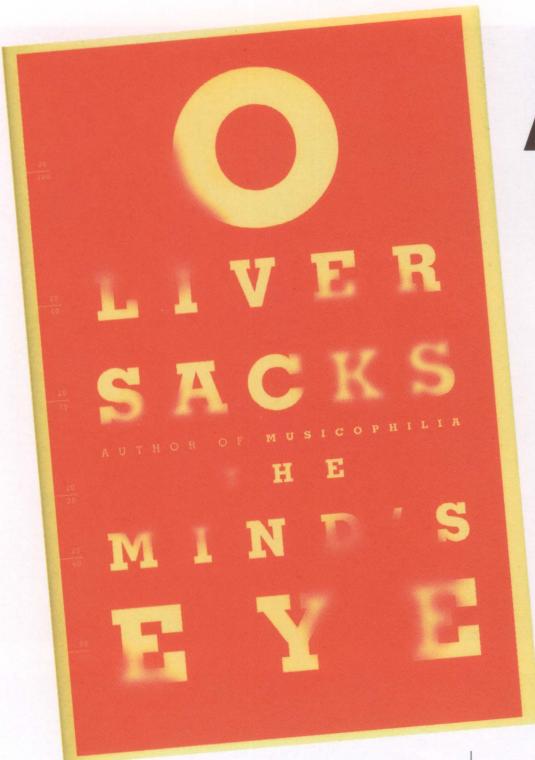
Circus men decorated the wagons with ornate carvings and oil paintings. They competed with one another to feature the largest and most ornate of all wagons. Circus owners went to the finest

builders of the day for wagons that were both rugged and ornate. Elaborate tableau wagons were imported from England.

By 1872 circuses began to transport their equipment by rail. Now they could travel farther and set up in the most lucrative cities. Greater profits allowed the circus owners to spend more on performers and equipment. The wagons became larger and more elaborate, transported to their destinations on specially constructed flat cars on circus trains.

The street parades that featured the wagons came to an end in the early 1930s. Most of the wagons

(Continued on page 15)



A Journal of Deep Loss

review by John Dennis

The first is face blindness, or prosopagnosia, in which one is unable to recognize or differentiate the faces of even close friends. The condition is less rare than generally assumed, and the book has prompted considerable new attention to it in the media. But it's the chapter titled "Persistence of Vision – A Journal" that will be the most fascinating and disturbing to readers of *Stereo World*.

While watching a movie in December of 2005, Sacks experienced fluttering, strange colors and a blind spot in his right eye. Tests revealed the cause to be an ocular tumor. His reaction to the following surgery and radiation treatments is documented in day by day journal entries that document in excruciating detail a progressive loss of vision in his right eye over the following years.

While the inconvenience and occasional dangers of not seeing objects or people on his extreme right are made disturbingly clear through several anecdotes, the impact of also suddenly finding oneself in a flat world is described in painful detail. Pouring wine in a friend's lap after missing the glass by about a foot is bad enough, but not being able to detect the elevation differences of curbs or steps is actually dangerous. In what he describes as "pseudo-stereo experiences" a newspaper laying flat on the floor appears to be sticking up, while a doormat is mistaken for a table appearing to block his way.

Such a sudden loss of stereo vision leaves no time for adjustment, and as Sacks describes, "I wake every morning to a cluttered world, everything is on top of everything else. There is no room anywhere, no space between things." Since his reflection in a

mirror now appears at the surface of the mirror, any spots on the mirror could be confused with lint needing to be brushed off his clothes. The loss of a sense of distance allows the confusion of a leaf on the sidewalk with a spot on his glasses as one of several examples he gives. He mentions his lifelong interest in stereoscopic imaging and his active membership in the New York Stereoscopic Society (he was also an NSA member) and how this intense awareness of stereo vision no doubt makes its loss even more glaring and adapting to a flat world more of a challenge than it might be to many others.

Always sensitive to neurological oddities, he describes how some flowers he was looking intently at after smoking some cannabis "thrust themselves into the space around them" and appeared in full 3-D roundness until the cannabis wore off. Did his memories of flowers contribute to such an accurate illusion of depth? Sacks offers no hypothesis, but the potential for independent research seems vast, offering hints at a doubtlessly already well tested approach to autostereoscopic television!

After two years of life in a flat world, Sacks reports that he now functions well despite losing the space... "in which I could locate myself and wander at will... That sort of space no longer exists for me visually—or mentally." His only remaining stereoscopic experiences are now in dreams where, perhaps like many 3-D enthusiasts, depth manifests itself in dreams about stereo images or equipment. The difference is that we can wake up to a world consisting of infinite planes of depth. A world whose perception in depth is made even more intriguing and vital through the loss described with such precision in *The Mind's Eye*.

People drop out of local stereo photography clubs or the NSA for a multitude of reasons, almost certainly the most depressing being a loss of vision in one eye (or worse, both eyes). We hear of these sad situations every couple of years or so, but seldom in any detail and certainly never before in 57 pages of an extensively footnoted journal by a famous authority on perceptual and neurological problems.

Writer and neurologist Oliver Sacks introduced the world to Susan Barry (SW Vol. 35 No. 2 pages 4 & 10) in a 2006 *New Yorker* article documenting the process and effects of regaining her stereo vision. That essay is one of those appearing in his latest book, *The Mind's Eye*, in which brain injuries or other neurological problems affecting vision are described with the same caring insight as are so many other tricks the brain can play, from the cruel to the bizarre, in his other 10 books. What makes *The Mind's Eye* especially noteworthy is the inclusion of chapters on two conditions affecting the author himself.

The Mind's Eye

by Oliver Sacks, 2010

Alfred A. Knopf. Hardback, 263 pages, ISBN 978-0-307-27208-9.

Bert M. Zuckerman

1924-2011

Frequent *Stereo World* contributor Bert Zuckerman died at his home on March 26th after a series of illnesses over the past year. A University of Massachusetts professor, Dr. Zuckerman was an international authority on the biology of nematodes, microscopic roundworms living in the soil. His research ranged from investigations of crop damage and population dynamics to the biology of aging, and his findings were published in over 150 research papers. He is credited with seven books, several laboratory manuals, three patents for novel biopesticides, and numerous appointments to editorial boards for journals in nematology and plant pathology. He served as Agricultural Consultant to the government of Malawi through the United States Agency for International Development and was elected a Fellow of the Society of Nematologists in 1983.

Zuckerman's huge collection of stereoviews of Palestine, combined with his research and writing skills, led to his seven feature articles for *Stereo World*, two of which received the NSA Award for Best Article on Historical Stereoscopy and two of which received Honorable Mention in that category. He was able to describe the travels and adventures of the stereographers in these articles in a way that went beyond mere documentation. His open-ended, international quests for obscure stereoviews known or even rumored to exist, as well as his extensive research into photographers' journals and publishers' lists, led him to discoveries of lasting importance to photo historians. Perhaps most memorable of all will be the richness of his writing when combined with his passion for the search, as in his account of finding some views that ended up in his article "There Were Soldiers at the Altar: Russian Pilgrimages to the Holy Land" in Vol. 28 No. 6. While doing research at the Hadassah Medical School in Jerusalem some years ago, he tells of spending Saturdays

"... ferreting through shops in the old city . . ."

One day my wanderings quite accidentally led me to a cavernous, darkened shop set inconspicuously on a side street. Within was dimly outlined an assortment of goods stacked without order on the floor and tables. At first the store appeared unoccupied, but as my eyes accustomed to the darkness, the outlines of three wraith-like, shriveled figures emerged, immovably poised on small chairs. These proved to be the proprietors, alive, but as events proved, just barely. Probing languages, French proved to be a fragile but sufficient bridge for communication. To my great surprise a query "old photographs" provoked a creaking response from the old man. He quiveringly arose and led me to a dark, musty corner at the rear of the shop. A small bulb was lit, and to my great delight, three shelves upon which were stacked hundreds of stereoviews were revealed.

The rough age of the pictures was quickly evident from the presence of Turkish soldiers in the scenes. . . I eventually selected about 25 views for purchase. Upon return to my room I realized that I had not previously seen anything like these stereoviews. I returned the following week and bought many more and shortly thereafter returned to the United States.

The very next year my project continued and at first chance I headed back to the same shop. However, this time I

found two Israelis pouring through the views. I had told friends about my discovery and that, in the narrow confines of Israel, was a mistake. The pile of views had diminished significantly, but after carefully sorting through the remainder I found several I had not seen previously.

The next year when I returned to Jerusalem the store was closed. A friend told me that the old man had died and the sisters had returned to Greece.

Without reservation I can recommend reading any or all of the *Stereo World* articles by Bert Zuckerman as listed here.

"Nineteenth Century Tourist Views of the Near East" Vol. 22 No. 5. (HM 1996).

"Edward L. Wilson's 'Scenes in the Orient': The Arabia Series" Vol. 24 No. 4 (NSA Award 1998).

"Charles Bierstadt's Stereoviews of Tripoli, Egypt and Palestine" Vol. 25 No. 4. (HM 1999).

"Peter Bergheim's Holy Land Stereoviews" Vol. 26 No. 6.

"There Were Soldiers at the Altar: Russian Pilgrimages to the Holy Land" Vol. 28 No. 6. (NSA Award 2003).

"The Photographic Journey of John Cramb to Palestine in 1860" Vol. 30 No. 2.

"British Army Survey: Views of the Sinai Peninsula -1868-1869" Vol. 32 No. 1.

- John Dennis 

Wagons of the Great Circus Parade

(Continued from page 13)

went into storage or were modified for other purposes. Some were simply abandoned and fell into disrepair and many were lost to fires. Collectors, film studios, zoos and department stores acquired those that remained to be used for display.

In 1960 the director of the Circus World Museum, Charles P. "Chappie" Fox began to search for the remaining wagons. He was able to track down most of them including some from Great Britain. Many were rotting in farm fields or warehouses. Those he acquired were sent to the Circus World

Museum in Baraboo for restoration. That collection of more than 200 wagons and show vehicles is the world's largest. The wagons illustrated in this article were among the many included in the 2009 parade and were photographed while on display prior to the parade.

References

Fox, C.P. Chappie, *Horse Drawn Wagon Collection at the Circus World Museum*, 1994

Fox, Charles Philip & Parkinson, Tom, *The Circus in America*, 1969

Topham, Susan & Foley, Erin, *The Colossal Book of Magnificent Circus Wagons*, 2009 

THE SOCIETY

News from the
Stereoscopic Society of America

Ray Zone

Speedy Keystone Folio

It was Bill Walton who created the Speedy Folios in 2000 as a way to more rapidly share print stereoview cards made by SSA members. Bill's motto for the Speedy Folios was "Keep 'em moving!" and a 5-day rule was always generally aspired to, if not observed, in these postal folios and they were limited to, at most, twelve members. Bill was also fond of black-and-white stereoviews so this format was inaugurated as a genre for some of the Speedy print folios.

Currently, David and Linda Thompson, known generally as "Team Thompson," are serving as Circuit Secretaries for two of the Speedy black-and-white print folios, named Speedy "Keystone" and Speedy "Mike." It's interesting to observe the venerable tradition of the monochromatic stereoview card in the hands of contemporary makers, especially in a digital age.

There is something special about black-and-white stereoview cards that lifts them into the realm of the surreal. There is something about the passage of time that is inherent in the genre and the way

that stereoview cards don't just seem to capture a "moment," but also seem to seize the flow of time itself, its utterly transient nature.

One of the newer members of the Speedy Keystone Folio is David Kuntz, a member of the Stereo Club of Southern California (SCSC) and a stereophotographer for over 30 years who has recently embraced the digital toolsets for stereoview card making. David recently wrote a highly useful tutorial about how to use Stereo Photo Maker (SPM) in the production of stereoview cards. Masaji Suto, inventor of SPM, has built in a very handy, and customizable, template for stereoview card production.

In a recent round of the Speedy Keystone folio, David submitted a digital view titled "A Crack in the Fence." This view, notes Kuntz, was "shot with my van Ekeren Panasonic Lumix rig handheld at reduced interocular outdoors with available light only." David then converted the view to black-and-white in Adobe Photoshop. "I lightened the greens," he adds, "and used the sharpen filter to

make the image grainier and somewhat mimic the effects of infrared black & white film." He then aligned the stereo pair in SPM and produced the finished card in Adobe Illustrator.

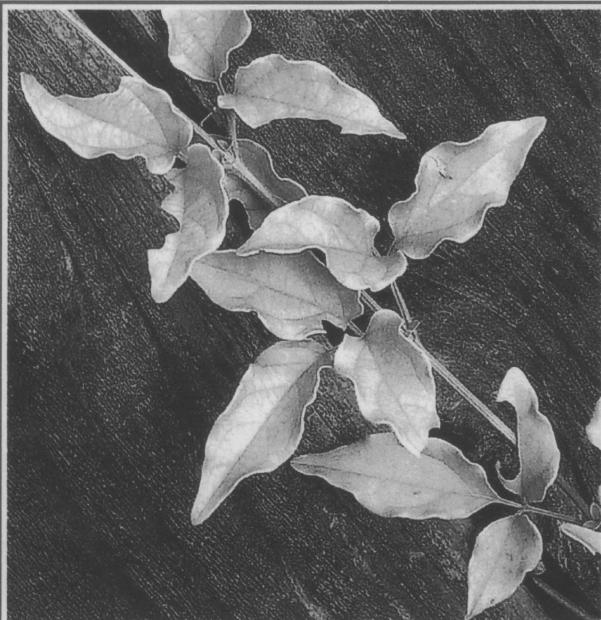
"Once you begin in black-and-white," writes Speedy Keystone member Bill Patterson, "one's roots remain there, I find. But photography is a gem of many facets and great things always lie ahead."

Speedy Mike Folio

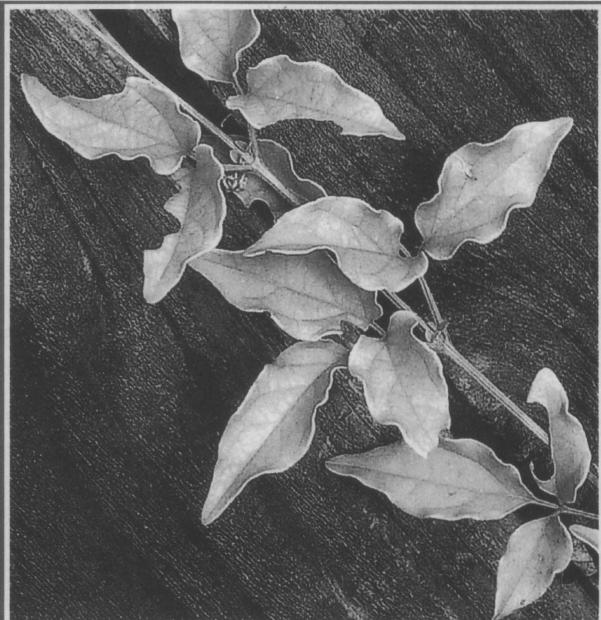
The Speedy Mike Folio shares some members with Speedy Keystone but all participants in each folio seem to share a veneration for the unique qualities of the stereoscopic image in black-and-white. There is a natural marriage between black-and-white and the virtual construct of stereo. Just as the mind fills in the black-and-white image with color, the perception of depth is completed in the brain, building a spatial paradigm.

Both David and Linda Thompson are very accomplished black-and-white stereographers them-

"A Crack in the Fence." A digitally processed b&w view by David Kuntz emulates the look of infrared photography.



A Crack in the Fence



A Crack in the Fence

Stereoview by David W. Kuntz



Stereophotography of the World
Salem, Oregon 97317 U.S.A.

selves. In a recent folio David shared a stereoview he titled "1915 Russell." It is a beautifully captured monochromatic view of a classic steam-driven tractor. With his notes on the back of the stereoview card, David writes "In 1915 a dozen Silverton, Oregon wheat farmers pooled their money at \$100 each to purchase the Russell. It would chug from field to field until about 1950. In 1977 it was sold to Lowell Boyce who restored it." One of the beauties of the stereoview card format, of course, is the great opportunity it presents to document cultural history and image provenance with notes on the back. So many of the black-and-white stereoview cards in the Speedy Keystone and Mike folios demonstrate this sense of cultural history.

To photograph his view of the Russell tractor, David used a twin Sony VI rig, handheld on an overcast day and Costco processed the

"1915 Russell." Nostalgia pervades this view of a 1915 steam-driven Russell tractor by David Thompson.

digital files to print them on Fuji paper. The view itself was photographed during the Great Oregon Steamup in 2008.

How to Contact the SSA General Secretary

Ray Zone is the General Secretary of the Stereoscopic Society and in that position is responsible for production of this column in *Stereo World* magazine and, according to the Membership Rules of the Society, is also "responsible for trying to keep the Society functioning effectively and harmoniously." Folio secretaries and any member of the NSA interested in the SSA are encouraged to contact Ray via email at:

r3dzone@earthlink.net.

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folios. Both print and transparency formats are used, and several groups are operating folio circuits to meet the needs in each format. When a folio arrives, a member views and makes comments on each of the entries of the other participants. His or her own view, which has traveled the circuit and has been examined and commented upon by the other members, is removed and replaced with a new entry. The folio then continues its endless travels around the circuit. Many long distance friendships have formed among the participants in this manner over the years.

Stereo photographers who may be interested in Society membership should contact the Membership Secretary, Les Gehman, 3736 Rochdale Dr., Fort Collins, CO 80525, (970) 282-9899, les@gehman.org

Judy Goings shot this stereo of the SSA Group following the July 15 dinner during NSA 2010, Huron, OH.



A.C. McIntyre First Photographer of the Thousand Islands

by Tom French

The 1000 Islands (actually close to 2000 individual islands) is a fifty-mile stretch of the St. Lawrence River formed where the waters of the Great Lakes empty from the eastern end of Lake Ontario. The border between the United States and Canada splits this section of the river, which ranges in width from ten miles at its highest point to about a mile further down river.

For almost 150 years, it has been a tourist destination for both countries, frequented by the likes of George Pullman (of the Pullman Palace Car Company), the Newhouse family (owners of Advance Publications, one of the largest magazine and newspaper publishers in the United States), and Edward John Noble of Life Savers Candy fame. It is also where "Thousand Island" salad dressing was first made.

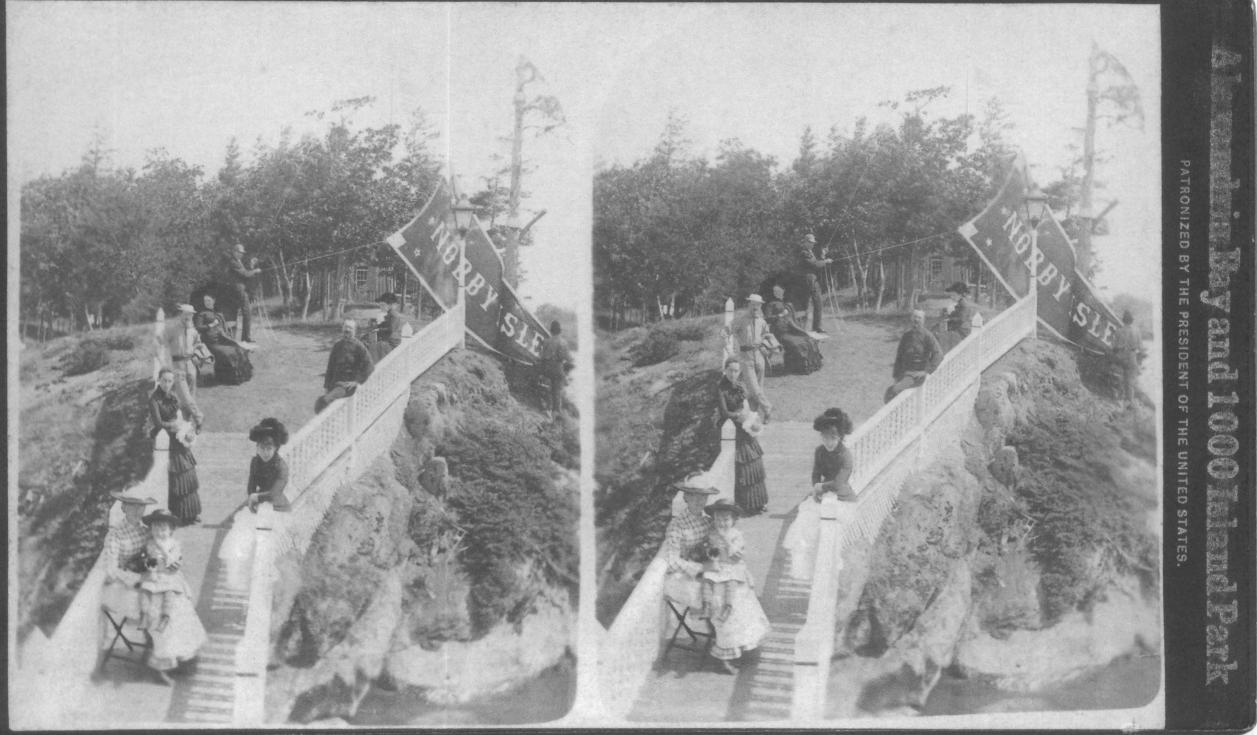
Alexander Carson McIntyre, or A.C. as he was known, was perhaps the most accomplished and prominent early photographer of the region. His photos became ubiquitous to the area during the late nineteenth century, and his photos were, and in some circles continue to be, synonymous with the region. Walk into any museum or browse any book associated with the history of the Thousand Islands, and you will no doubt find multiple images taken by A.C. McIntyre.

The son of a Scottish sea captain, he was born August 30, 1822, in New Brunswick, New Jersey. Little else is known about his early life until, as a recent widower, he opened a photography studio in Brockville, Ontario, in 1855.

McIntyre was at the forefront of the photographic revolution and experimented with and perfected many new technologies from the daguerreotypes that he started with in 1855, through ambrotypes, calotypes, stereo imaging, and the dry plate process that emerged in the early 1880s. At various points

"Nobby Isle." The Island was purchased by Civil War Hero Henry Heath by 1872. At 16, Heath enlisted in the 20th Regiment of the Massachusetts Volunteer Infantry, in a company commanded by future Supreme Court Justice Oliver Wendell Holmes Jr. Wounded and captured in the Battle of Bull's Bluff near Leesburg, Virginia, Heath was later freed through an exchange of prisoners. After the war he became successful in real estate and developed connections with the Pullman family (of the Pullman Palace Car Company). He encouraged McIntyre to set up a photo studio in Alexandria Bay, which might also explain why McIntyre christened his yacht Nobby. This 1872 view shows an early McIntyre yellow mount, with a label printed on the back bleeding through on the left. Note the group's croquet hoops in the foreground.





PATRONIZED BY THE PRESIDENT OF THE UNITED STATES.

McINTYRE'S VIEWS OF THE 1000 ISLANDS PARK

in his career he operated studios in several places, including Montreal, but it is his work in the Thousand Islands which gave him the most success and became the most enduring—so much so that his images are still alive today.

It is believed that he established his studio in Alexandria Bay, New York, in the heart of the 1000 Islands, in the early 1870s. He was certainly doing business there by 1873 when he photographed a series of stereoviews of the "ascension" of a large, lighter-than-air balloon, *The Atlantic*. He operated his Brockville, Ontario, store during the winter months, and then left it to an assistant while he went to Alexandria Bay for the summer.

The location of his Alexandria Bay store seems to have moved from year to year. Advertisements exist announcing that his shop will occupy a portion of Centennial Hall. Another announcement states he will be in "an octagon studio." Yet another notice proclaims that he will be located in the "Blue Glass Observatory in front of the Thousand Island House."

He clearly took thousands of photographs in his lifetime. He was available for private sessions and he sold pre-prepared souvenir stock views in his stores.

"Nobby Island." This example of a McIntyre dark Mount, boasting the patronage of the president, is a view commonly found on an orange mount as well. The view was taken from the dock at the head of Nobby Island. If you look behind the flag, you can see the original Henry Heath cottage. The cottage is still on the island, though it appears to have been moved to the left of where it is in this photo. Measurements of the Heath Children's heights, dating from the 1880s, can still be found etched into the door trim and written on the walls in the main room downstairs.

Most of his views were taken along the river and amongst the thousands of islands. He would have had to lug a portable darkroom tent across the water in a boat. For this purpose, he obtained, in 1875, his own steam yacht, *The Nobby*. He used it not only to get around and as a prop in his photos, but also, some believe, as a staging platform for his darkroom tent.

He obtained the yacht from Oneida Lake just north of Syracuse, New York, in May, 1875 and brought it to the Alexandria Bay area in late May via the barge canal (part of the old Erie Canal system) and Lake Ontario, a journey of almost a hundred miles. He had to put in about half way across Lake Ontario due to an abundance of ice (bergs from one to twenty-five feet) that blocked his way—something that would be considered a fluke of nature today as the ice is usually gone by mid-April. By 1879, he had purchased a larger yacht, *The Idlewild*, which allowed him to sleep over on the boat.

One version of McIntyre label listing the number of views available for various locations along the St. Lawrence River.

A. C. McIntyre,

Alexandria Bay, River St. Lawrence

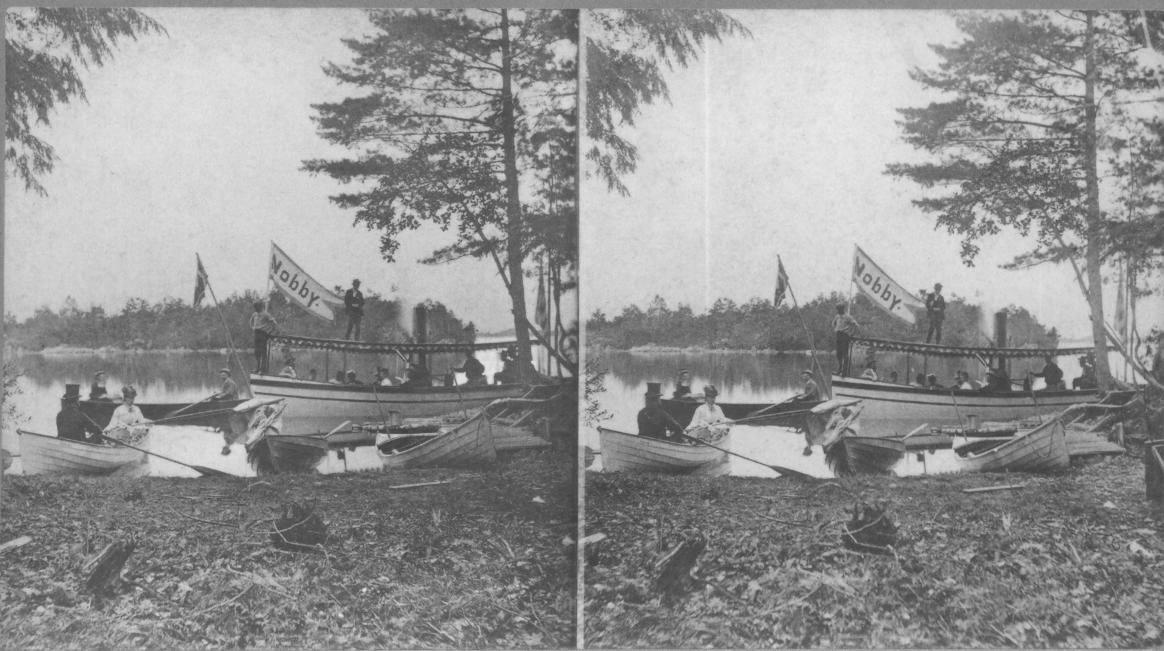
New and attractive Views of the
THOUSAND ISLANDS,
WHOLESALE AND RETAIL.

Stereoscopic Views, Large Views, size varying from 4x7 to 16x20 inches, Mounted and unmounted. Photographic Views taken to order.

STEREOSCOPIC VIEWS OF

Alexandria Bay	from 100 different Negatives.
Bonnie Castle	40 "
Manhattan Island	30 "
Hayden Island	75 "
Pullman Island	25 "
Westminster Pk.	100 "
Sport Island	30 "
Little Lehigh	12 "
Lost Channel and Fiddler's Elbow	12 "
1000 Island Park	300 "
Round Island	36 "
Fort Carlton	24 "
Point Marquette	36 "
General Views of the St. Lawrence	500 "
Brockville	50 "
Idlewild	30 "
Nobby	15 "

View of



"Nobby." (Also labeled as "View of Nobby Isle" on a different mount) This view shows the Steam Yacht Nobby, purchased by McIntyre in 1875. Orange mount. The number 52 is scratched into the negative at the lower right.

He was an astute salesman with a knack for advertising his skills and wares, as evidenced by the various notices and advertisements that appeared in the local papers of the day. In the process, he developed a variety of labels that advertised not only his business, but also extolled the virtues of the region and other area establish-

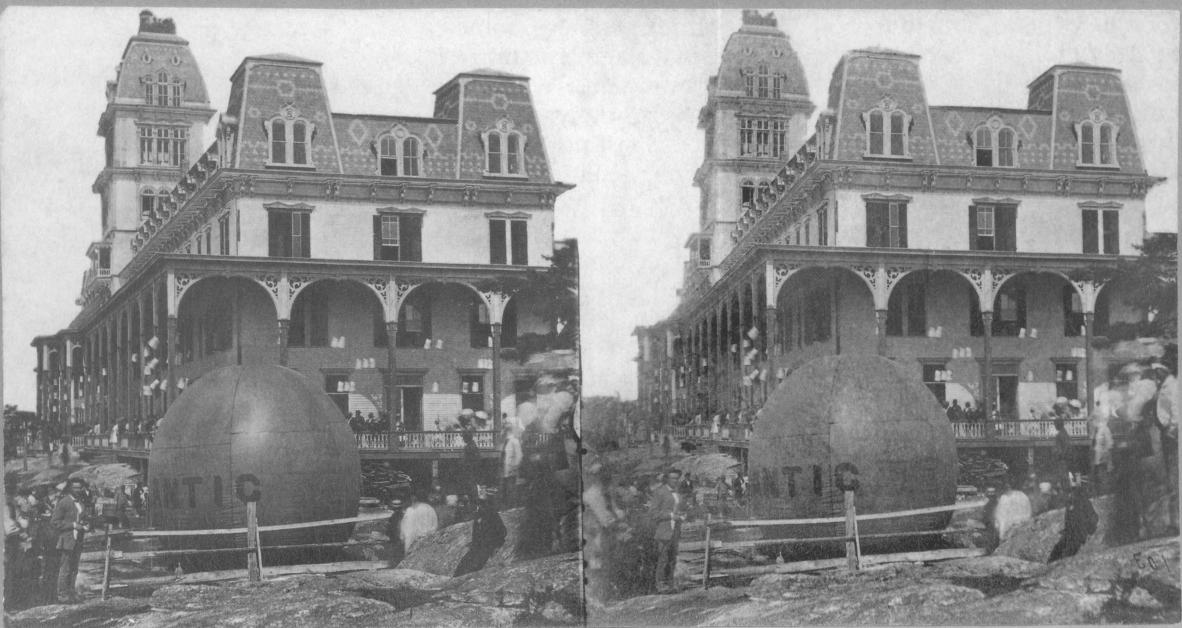
ments. His labels were copied verbatim (minus the name) by at least one other photographer, George Monroe (George Eastman's personal photography teacher).

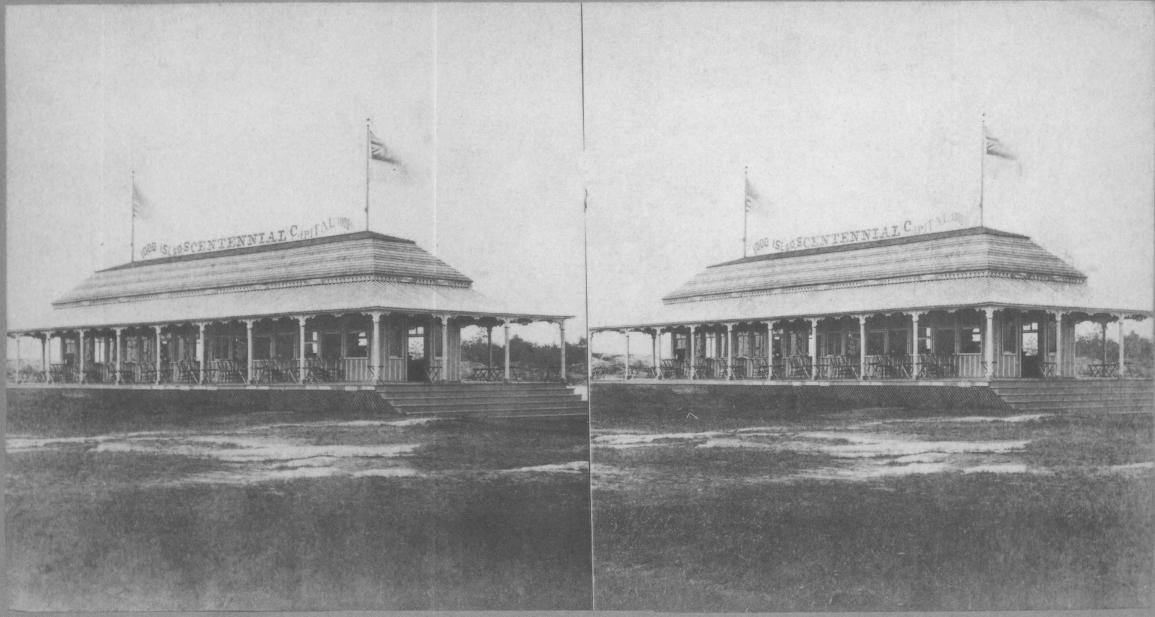
Prior to opening his studio in Alexandria Bay, he was also located

in Ogdensburg, New York, about 30 miles down river. It was during this period, beginning in about 1868, that McIntyre used yellow mounts. He continued using the yellow mounts with simple labels, often on the front of the card, for the first few years in his Alexandria Bay shop. But by mid-decade, he had switched to the orange mounts and the eloquent labels often associated with his work.

Depending upon which label was used, it might include useful

A Balloon Ascension from Thousand Island House. Reports in the local papers for July 24, 1873 indicate that the balloon, piloted by a "Professor Squire," traveled 20 miles before landing. The crowd "carried Squire in his willow basket to the edge of the river," where Squire cried out "let go." The hotel is the Thousand Island House, built the previous winter by O.G. Staples, who later went on to purchase several properties in Washington, DC, including the Willard Hotel. Number 103 is scratched into the negative at lower right. Orange mount.





"Centennial Hall, Alex Bay." If you look closely, you may note the misspelling of "islands" with an "&" instead of an "A" at the left of the sign. The hall was built in 1876 as a refreshment stand and pavilion for entertainment. The ceiling was an arched sky-blue with silver and gold stars. An announcement in the May 23, 1878 edition of *The Brockville Recorder* indicated that McIntyre would occupy a portion of Centennial Hall. His Alexandria Bay shop was at different locations from year to year and the record can be confusing. Later views of Centennial Hall show the banner on top replaced with the words "ice cream" spelled out in the roof tiles. Orange mount. Courtesy of Jack Brown

information for tourists, including railroad routes and schedules, hotels, steamer routes, and certain attractions. Although many of the McIntyre labels had a place to

indicate a number for the view, it is blank on most labels. Perhaps

McIntyre had a numbering system, but it was never fully implemented. Even his titles are inconsistent for purposes of indexing. Many cards of the same view have different titles, and many cards of different views (of the same location) have the same title—simply the indication of the place. Most titles are handwritten. Research suggests that McIntyre had 3-5 employees

Although the label on this card does not indicate a title, it is one of several views that McIntyre took during President Chester Arthur's visit to the region in 1882. President Arthur is the individual on the left. Orange mount.





in his Alexandria Bay shop during the summer season, and several different handwriting styles can be found. Collectors of McIntyre stereoviews are encouraged to carefully examine similarly labeled cards for subtle differences in the images—sometimes the only evidence that the two views are different exposures.

Throughout most of the 1870s, his mounts were 3½ inches high, but at some point in the late 1870s or early 1880s, he began using four inch mounts as well. His later views were also on dark mounts with his name in gold lettering along both sides. There are examples of cream-colored mounts as well.

McIntyre used a variety of labels that extolled the virtues of the region and other area establishments. One featured a map of the route of the Utica & Black River Railroad. Local photographer George Monroe used the identical view label seen here, but with his own name above the line drawing.

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Scenery Among the Thousand Islands, on the River St. Lawrence.
FROM PHOTOGRAPHIC STUDIO OF THE
THOUSAND ISLAND HOUSE, ALEXANDRIA BAY, N. Y.
A. C. MCINTYRE, Artist.

THE THOUSAND ISLANDS lie along in that great body of water called a river—more properly a lake, or a fresh water ocean—between the United States and Canada. Descriptions of these islands usually seem like extravagant eulogy to those who have not seen them. Those who have passed a week or two among them, generally acknowledge, that a description is impossible. In summer the air is so cool and salubrious as

View

No. Haydée Island

seemingly to intoxicate all who attempt to describe the scenery.

THE THOUSAND ISLAND HOUSE has come to have an unchallenged reputation as a first-class watering place House. It is very commodious, accommodating from six to seven hundred guests at a time, with every convenience for comfort, sport, society, and every form of pastime.

O. G. STAPLES,
Proprietor.

"Camp Charming." This view, published by McIntyre, shows President Ulysses S. Grant (seated in the dark suit with a top hat on his knee) during his visit to the 1000 Islands in 1872. President Grant was the guest, along with Civil War Generals William T. Sherman and Phillip H. Sheridan, of George Pullman of the Pullman Palace Car Company. Some believe the man to the left of Grant is Sheridan, but it is this author's opinion that the man is more likely the host, George Pullman. Although this view is usually attributed to McIntyre because of his label on the back, another theory is that it was actually taken by the Bain Brothers, of Clayton, New York (about 10 miles upriver), and sold to McIntyre with the rest of their collection in 1874 by James Bain when he left for Michigan. At least one McIntyre expert believes he would have advertised that he photographed President Grant had he actually taken the picture (in the way that he boasted that he was "Photographer of the President" after Chester Arthur's visit in 1882). There are several Bain views that can be found with early McIntyre labels, though I have not seen this particular view as a Bain. Orange mount.

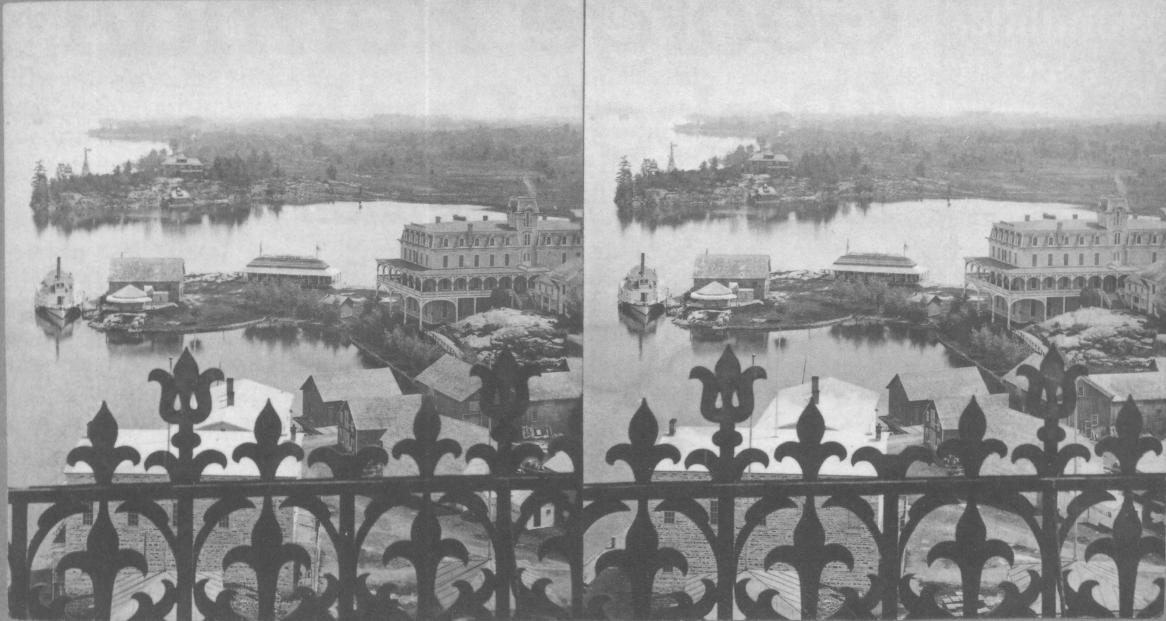
During the course of his career, he published views recording the visits of two sitting presidents to the 1000 Islands—Ulysses Grant in 1872 and Chester Arthur ten years

later. He traveled in a circle of nationally known photographers including George Monroe and Matthew Brady. Indeed, by comparing McIntyre and Brady plates, some believe there are questionable attributions to some of Arthur's trip photos.

By a second marriage, Alexander Carson McIntyre had five sons and three daughters. Upon his death in April of 1897, one of the sons, Gordon, took over the business until his own death in 1907. At that time, the value of the estate was "less than \$200. Its inventory including 'one lot of Island negatives' valued at \$15 and '2 retouching pencils,' at ten cents." But the history he left to the region is priceless.

Sources

Some of the information in the article comes from a presentation by Frederick J. McCarthy, Ed. D., that was given at the National



"East from 1000 Island House." This Alexandria Bay view taken from the top of the Thousand Island House (the tower in the balloon view) shows McIntyre's Octagon studio (center left) on Crossmon Point. The sign on the octagon structure appears to say, "Stereoptic Views of the Thousand Islands." Centennial Hall at center. The large hotel to the right is the Crossman House, one of the earliest hotels in Alexandria Bay. The house on the point in the distance is Bonnie Castle, built by Josiah Gilbert Holland, a famous 19th century author and friend and mentor to Emily Dickinson, Walt Whitman, and others. He was the founder and editor of Scribner's Monthly (*later the Century*), and bought his river property with the money he made from his novel, *Arthur Bonniecastle*. Orange mount.

Stereoscopic Association's August, 1980 convention in Canton, Ohio.

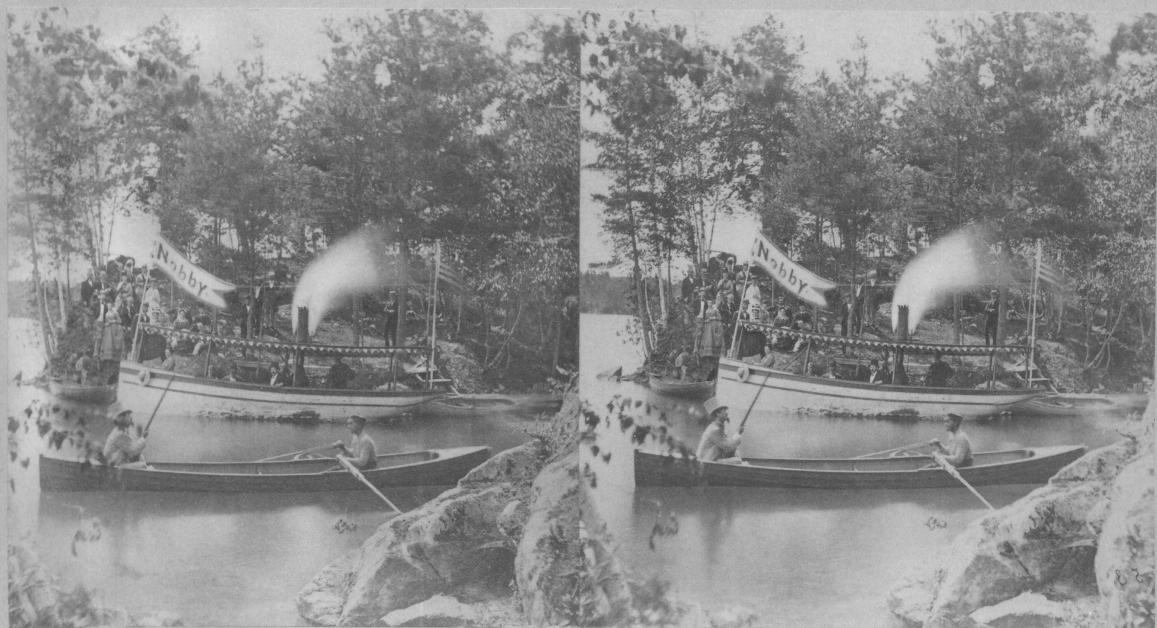
Jack Brown has been a significant source for my research, and he has provided me with copies of some articles from the 1870s from *The Brockville Recorder*.

Several of the McIntyre views are originally from the collection of Dan Grant and are now in the

Tom French/Nellie Taylor collection.

Author Tom French was raised on an island in the St. Lawrence River. He teaches 7th grade English in Massena, New York and his writing has appeared in numerous publications as well as on North Country Public Radio. He has collected artifacts of the 1000 Islands for nearly twenty years along with his mother, Nellie Taylor. His book *River Views – A History of the 1000 Islands in 3D* will be published in May. 

No 53, "View of Steam Yacht at Nobby Island." This early McIntyre view on a yellow mount is in remarkable condition and reveals his skills at stereoscopic composition as well as the precise posing of large groups. Unusual for a McIntyre back label, this one has a typeset title and number. (The same number is scratched into the negative at lower right.)



Personalities in Perspective

by Richard C. Ryder

George Herman “Babe” Ruth

Baseball's Fabled “Sultan of Swat”

It was the third game of the 1932 World Series. With the game tied in the 5th inning, the next batter stepped to the plate in Chicago's Wrigley Field, the number three emblazoned on his pinstriped Yankees' uniform proclaiming his identity. The jeering of the unfriendly crowd increased in intensity. He had already hit one homer in the game. Now, with a 2-2 count, he raised his arm and gestured toward the field. Some thought he was pointing at the pitcher or at the Cubs bench, where some of the most virulent catcalls were coming from. To others, including teammate Lou Gehrig and New York Governor and presidential candidate Franklin Roosevelt, he seemed to be pointing toward the center field seats.

Perhaps he rattled pitcher Charlie Root. In any event, the next pitch was met by a sharp, definitive crack of the bat and the ball sailed deep over the center field wall, precisely where so many thought he had been pointing.

Had Babe Ruth actually called his shot? Gehrig thought so. Up next, he also hit a home run. Not that anybody noticed.

Ruth was born in February of 1895, the eldest child of a Baltimore saloonkeeper. Yet, beaten and unloved by his parents, he proved "incorrigible" and was packed off to St. Mary's Industrial School for Boys, a local reformatory. It was here that George Herman Ruth learned baseball, playing every position and moving to the varsity team by age twelve. At nineteen, he was signed by the then minor-league Baltimore Orioles, soon moving on to the major-league Boston Red Sox.

It was a whole new world for the undisciplined and undereducated Ruth. He ate, drank, and caroused with the best of them—and promptly married a local waitress. It was the beginning of a lifestyle that would in time undermine his career.

He was now the best left-handed pitcher in the American League, winning 89 games in his six years with Boston, and racking up nearly thirty scoreless innings in World Series competition. Yet he was even more valuable in the field, where he hit a record-shattering 29 home runs in 1919. Babe Ruth's future in Boston seemed assured. But such was not to be.

H. Harrison Frazee owned the Red Sox but his passion was the theater. There was little he wouldn't do to finance his quest for a Broadway success. In 1920, he sold his star player to the New York Yankees. Frazee eventually got his hit, but back in Boston, Red Sox fans would rue the "Babe Ruth curse" for almost three generations. Having won five of the first fifteen World Series, they would not win another for the rest of the century.

Baseball itself was in tatters that spring. Just months before, eight members of the Chicago White

Keystone No. 32598, "Babe Ruth, King of Swat, at St. Petersburg, Florida." Photographed during spring training.



32598 - Babe Ruth, King of Swat, at St. Petersburg, Florida.

Sox had conspired to "throw" the 1919 World Series, or had at least acquiesced in the gamblers' scheme. The echoes of the "Black Sox Scandal" still reverberated across America. It would take a lot to restore confidence in "America's game."

It was just at this time that the Babe arrived in New York. It was Ruth as much as anybody who saved the game, transforming it into a more exciting, offensive-minded exhibition of hitting power that drew in the fans. In 1920, Ruth went on a tear, with 171 RBIs and 177 runs scored, hitting some 54 home runs that year, almost twice as many as with Boston the year before. Then he hit 59 homers in 1921. It all went to his head.

Nineteen-twenty-two saw Ruth suspended four times, forced to sit out nearly a third of the season for his antics, and hitting a dismal .118. But the following year he was back, greeting the opening day crowd at the newly built Yankee Stadium with a towering homer. He hit 41 homers that year and 46 the next.

Nineteen-twenty-five was another down year, with Ruth sidelined first for stomach surgery, then suspended by exasperated Yankee manager Miller Huggins. By now too, Ruth's wife, upset with his incessant antics, had left him. Yet two things happened that year that turned the Babe's career around. First, a twenty-one year old named Lou Gehrig joined the Yankees roster and soon proved himself every bit as intimidating to opposing pitchers as Ruth. Pitching around the Babe only got you Gehrig with a base runner: it was a classic lose-lose situation. Furthermore, Ruth soon took up with an attractive widow and model named Claire Hodgson whom, upon the death of his estranged first wife in 1929, he would promptly marry. Claire managed to keep the Babe's excesses largely under control.

He was now the most popular player in baseball, the "Bambino," the "Sultan of Swat," the "Caliph of Clout," spokesman for everything from cigarettes to breakfast cereals, including Wheaties, the "Breakfast of Champions," com-

manding an unheard of salary of \$80,000 a year by 1930. There was an autobiography of sorts, Babe Ruth's Own Book of Baseball, ghostwritten of course, but he did insist that he had at least read it—twice! Much of the Babe's enduring popularity stemmed from his love of children, although his widely-touted promise to hit a homer for an ailing youngster was mostly press hype.

In 1927, he achieved the impossible—hitting *sixty* home runs that year. Yet all those years of pigging out on hot dogs, soda pop, and illicit beer, the carousing late into the night, were taking their toll. By the time of the "called shot," five years later, he was clearly past his prime.

With America in the depths of the Great Depression, baseball was once again in the doldrums. To drum up business, the first interleague All-Star Game was held in 1933—and won by Ruth's theatriacs. Yet the years of hard living were catching up with him. He was older now, slower, even more out of shape. The following year, he created a sensation when he toured Japan with a team of American all-stars, helping to popularize the game there. But on his return, he found that the Yankees had decided to dispense with his services.

He had wanted to manage but couldn't even discipline himself. Instead he wound up back in Boston, with the no-account Boston Braves. He was no longer effective in the field. Yet in May of 1935, at Forbes Field in Pittsburgh, he hit an amazing three home runs in one game, the last, a monstrous, towering shot, his 714th. A week later he announced his retirement from baseball.

He was living on past glories now. One of the original 1939 inductees to the Baseball Hall of Fame in Cooperstown, he also played himself in *The Pride of the Yankees*, the story of his old friend Lou Gehrig. There was even a film about his life, *The Babe Ruth Story*, yet he groused that William Bendix, the actor who portrayed him, couldn't even manage a convincing swing of the bat.

In June of 1948, in a manner eerily reminiscent of Lou Gehrig's last appearance, a frail and wasted Babe Ruth stepped to home plate at Yankee Stadium and managed to rasp a few words into the microphone. The occasion was the 25th Anniversary of the ball park, the "House that Ruth Built." In just two months, he was dead of throat cancer. At the funeral, in the sweltering heat, one sweating pallbearer commented that he'd give 100 bucks for a cold beer. So, another replied, would the Babe.

Alas, nothing lasts forever, but more than a third of a century would pass before the single season homer mark would fall to the Yankees' Roger Maris, the famous 61 in '61, and another decade before the career record would be surpassed by the Braves' Hank Aaron. One thing that seems certain never to be eclipsed is Ruth's place in the pantheon of sports heroes.

One remembrance of the beloved "Sultan of Swat," however, may not relate to him at all. The Baby Ruth candy bar, which many assume was named in honor of the Babe, supposedly wasn't. It was allegedly named after the daughter of President Grover Cleveland, the original "Baby Ruth," who was born during the interregnum between Cleveland's two nonconsecutive terms. The name had been coined by the newspapers, and nearly two decades after the child's death from diphtheria in 1904, was adopted by the Curtis candy company for their popular candy bar. Yet why the posthumous honor so long after the fact? That had happened in 1921, the year of the other Babe's astounding 59 home-run season with the New York Yankees. Could Ruth's embarrassing lifestyle and dreadful 1922 season have led the company to reinvent its product with a convenient if rather transparent "cover story"? 

R.I.P. RBT: My Favorite RBT 3-D Camera

by David Starkman

For more than 20 years RBT Raumbildtechnik in Germany has been making custom stereo projectors, 3-D SLR and Rangefinder cameras (made from two conventional 35mm cameras), and 41x101mm (Realist Format) plastic stereo mounts. The RBT web site www.rbt-3d.de has announced that the business has closed as of January 1, 2011.

Although the firm has closed, the three managing directors of the company will continue to offer warranty service and general service for all RBT products. See the web site for details. (RBT plastic stereo side mounts are expected to remain available through sources like www.berezin.com/3d or www.drt3d.com or Jon@make3Dimages.com.)

Stereo World editor John Dennis asked me to supply a photo of my favorite RBT camera. I'm happy to do so, but thought I should say a few words about my choice.

I've only used two RBT cameras. The RBT X2 (first model) and the RBT S1. Dr. T (George Themelis) has gone on record saying that he thinks the S1 is the best stereo film camera ever made, and I have to agree. Based on two Konica Hexar cameras, the S1 has incredibly sharp lenses, auto focus, motorized film advance and rewind, and a dedicated flash that works marvelously well. Of all of the twinned

35mm 3-D cameras, it is probably also the lightest weight and easiest to use.

However, after switching to twin digital 3-D photography in 2004, my S1 sat unused in a drawer—along with other 3-D film cameras that I was no longer using.

So, last year, it was the first of my film cameras to get sold. Why? Because in spite of all of the S1's features, it was *not* my favorite. For my favorite I choose my first, and only other RBT stereo camera—the X2 (first model).

The X2 was the first RBT model (made from two Ricoh KR10m's) to be fully automatic, and to retain virtually every feature of the camera that it was based upon. For me it was a dream come true. It had all of the features the public had come to expect in an SLR camera: through the lens viewing, coupled zoom lenses (28mm-70mm lenses on mine), interchangeable lens capability, auto exposure, auto rewind, and could also be set to several shooting modes including Manual. About the only thing it does not have is auto focus. I also liked that, with a 75mm lens spacing, it took two full 24mm x 36mm frames (the standard size), with a full frame in-between. The alternating one-frame/three-frame film advance and frame counting were taken care of automatically along with the motorized film

advance. So, one gets 18 stereo pairs on a 36 exposure roll. Also, the film format and spacing in this configuration is identical to normal flat 35mm film frames. So I could send a roll of slide film to a lab and get it mounted in 2" x 2" mounts without any special instructions. Upon receiving the mounted slides, I would just sort the matching rights and lefts, and often found the factory mounting good enough for hand viewing in a twin 35mm viewer. For slides that were good enough to project for competition, or a show, I precision remounted them in GEPE slide mounts.

I shot with this camera for over 10 years, and got many excellent slides. I used the 28mm zoom setting most of the time, and the SLR lenses also made it easy to use filters and polarizers.

I have to also mention that I had very good luck with this camera as far as reliability, too. Any custom-built camera cannot be expected to be as perfect and reliable as a factory made camera. I dropped the camera once, and eventually had to send it to have the top housing replaced. However, it worked, even with chunks cracked off and then held in place with electrical tape!

Today, thanks to my wonderful wife and partner, Susan Pinsky, lots of the 35mm 3-D slides shot with



A well-used RBT X2, 75mm base model.

this camera (and her more manual Miller Brothers twin Yashica FX3 3-D SLR) are being digitized and are becoming easier to find and view. There is still nothing better than a good 3-D slide in a hand viewer, but digital 3-D has many advan-

tages, and it's hard to go back to film now. In spite of that I just can't part with my favorite RBT camera—the RBT X2 (75mm base model).

3-D Content Winners at 2011 SD&A

Facing strong competition from around the world, the video "Fractal Odyssey" by NSA members Jerry Oldaker and John Hart (CO) won Best of Show in the Computer Graphics, non-theatrical class at the 2011 Stereoscopic Displays and Applications (SD&A) conference. The purpose of the annual SD&A 3D Theater is to showcase the wide range of 3-D content that is being used and produced all around the world. 3-D content segments shown in the 3D Theater session are usually limited to three minutes in length in order to allow as much 3-D content to be shown as possible. The 3D Theater provides a useful focus on the more artistic and creative side of stereoscopic imaging in juxtaposition to the technical focus of some of the other sessions of the SD&A conference. The 3D Theater session was held January 24, 2011 at the Hyatt Regency San Francisco Airport Hotel.

Best of Show - Live Action: "White Knuckles 3D" by OK Go (USA)

Honorary Mention - Live Action: "Stereo Timelapse" by Takashi Sekitani, StereoEyE (Japan)

Best of Show - CGI: "Fractal Odyssey" by John Hart and Jerry Oldaker (USA)

Honorary Mention - CGI: "Holy Moly" by Passmore Labs (USA)

Best of Show - VFX: "Dead Boring" by Dave Edwardz, AFTRS (Australia)

Honorary Mention - VFX: "Experiments in Stereoscopic Imaging" by iCinema (Australia)

Forty different 3-D Video segments were shown during the two hours of this year's SD&A 3D Theater show, representing a wide range of different content types from producers of 3-D content located all around the world. The SD&A 3D Theater is one of the highest attended sessions of the conference, which is the largest and longest running technical conference dedicated to the discussion of technical stereoscopic imaging topics. At this year's conference over 80 technical manuscripts were presented covering a wide range of stereoscopic imaging topics. See www.stereoscopic.org.

2011 ISU Congress

While the International Stereoscopic Union (ISU) Congresses take a greater commitment of time and money for people in the U.S. to attend, they are a wonderful 3-D get-together of like-minded stereo nuts from around the world. This year there is only about a month between the NSA and ISU, but if you can afford to do both, it's August 17-23, 2011 in Egmond

aan Zee (northwest of Amsterdam) in the Netherlands. See <http://world-of-3d.com/isu-2011-congress>. 

This column depends on readers for information. (We don't know everything!) Please send information or questions to David Starkman, NewViews Editor, P.O. Box 2368, Culver City, CA 90231.

A 3-D Smartphone from LG

What may be the first autostereoscopic display phone with a 3-D camera to hit the U.S. market was shown at the recent Mobile World Congress in Barcelona, Spain. The "Optimus 3D" smartphone from LG features a 4.3-inch touchscreen on the front and a pair of 5MP cameras on the back to take 3-D stills or videos which can be also be played back on a 3-D TV.

3-D movies and games were demonstrated on the unit at the conference. LG is said to be working with YouTube to bring videos from the new phone to YouTube's dedicated 3-D channel. In a move toward direct competition with the Nintendo 3DS, the unit will come preloaded with three games from Gameloft. Inside are a dual-core 1GHz OMAP 4 by Texas Instruments, 8GB of internal memory, 4GB of dual channel DDR2 RAM, and mini-HDMI out for 3-D playback at 720p. There's no word yet about what network the phone will run on or about precise release date or price.

The LG Optimus 3D phone from both sides, showing the "switchable barrier," autostereoscopic screen and the closely spaced lenses so common to recent 3-D cameras and camcorders.



The Tyranny of Flatness

Monocular Dominance in Visual Culture

by Ray Zone

"The uniform application of a principle of form is what rules me in the imaginative alteration of an object. One thing is sure—we have to transform the three-dimensional world of objects into the two-dimensional world of the canvas."

—Max Beckmann,
"On My Painting"

We are indebted to German expressionist painter Max Beckmann for stating the facts so baldly, for quite simply expressing the fundamental mandate of Western visual culture, which is to render the volumetric world on a flat surface. For over 500 years, the primary work of the painter, photographer and filmmaker has been to transfer the spatial richness and complexity of life, with all its ambiguous spaces and interstices, on to a flat plane.

Beckmann rarely explained his painting but in a 1938 lecture given at the New Burlington Galleries in London, he plainly verbal-

ized the central tenet of Western art and clarified the dominance of flatness at its aesthetic core.

Declaring that his aim in painting was to capture the "magic of reality" and to transfer it to the canvas, Beckman observed that "What helps me most in this task is the penetration of space. Height, width, and depth are the three phenomena which I must transfer into one plane to form the abstract surface of the picture, and thus to protect myself from the infinity of space."

The primary artistic strategy for planar art to protect itself from the "infinity of space" has been that of spatial mimicry, or codifying depth as a series of monocular visual cues. In the absence of binocular displays, artists of the Renaissance devised the technique of artificial perspective. It was Giorgio Vasari (1511-1574) who coined the term "The Renaissance"—il rinascimento—and in the pages of his *Lives of*

the Artists we can note the inauguration of artificial perspective and begin to trace the rise of monocular dominance in art with the contributions of Florentine painters Paolo Uccello (1397-1475) and Leonardo da Vinci (1452-1519).

1. Artificial Space on the Canvas

"Oh, what a delightful thing is this perspective!"

—Paolo Uccello

Vasari notes in his *Lives* that Uccello might have been one of the most original and inventive painters of his era had he not devoted so much of his time to a study of the finer points of perspective. According to Vasari, Uccello "spent his life without any intermission on the study of the difficulties of art"

He established the rules of linear perspective. From the ground plan to the cornices and summit of the roof, he reduced all to strict rules by converging the lines toward the center, after having fixed his point of view higher or lower to suit himself. He found means to make his figures really seem to be standing on the floor plane and showed how they must diminish in the distance.

So intent was Uccello on codifying the principles of perspective, that he kept himself in seclusion for months at a time. This use of his time kept the artist impoverished. When viewing the fruits of Uccello's labor, his friend Donatello remarked to the artist "Ah, Paolo, with this perspective of thine, thou art losing the substance for the shadow."

Paolo Uccello works out perspective in "The Profanation of the Host."



John White, in *The Birth and Rebirth of Pictorial Space*, after noting that ever since Vasari, Uccello's name has become "almost a synonym for the new science" of perspective, also observes that "In spite of this, the nature of Uccello's interest in perspective still remains surprisingly obscure; an obtrusively precise question to which many vaguely unsatisfactory answers have been given." The complexity of Uccello's approach to perspective can be seen in one panel from a series of six, titled "The Profanation of the Host." In this and other works by Uccello, the artist "was inquiring into the nature and validity of the new method, and weighing it against his experience of the natural world." And, "The effect of this ingenious complexity is to express the continuous shifting of the 'vanishing points' that occurs as the eyes are turned to look at nature." White notes that, "in certain compositions" Uccello was "busily increasing his knowledge of the powers of artificial perspective; in others he was shaking its foundations."

In his treatise on *The Art of Painting*, Leonard da Vinci also developed the theory of synthetic perspective. Alfred Lerner, in his introduction to da Vinci's volume (Wisdom Library: 1957) states very simply that, during the Renaissance, "painters had learned to master the difficult art of depicting objects, animate and inanimate, on a flat surface in such a way as to express dimensions and spatial relations, to achieve the illusion of depth through the proper use of lighting, contrast, color, and values."

To da Vinci, perspective was of preeminent importance to the painter. "Perspective is to Painting," observed Leonardo, "what the bridle is to a horse, and the rudder to a ship." Da Vinci made schematic drawings that illustrated viewing conditions for perspective and wrote that linear perspective "consists in giving, by established rules, the true dimensions of objects, according to their respective distances." The usefulness of monocular vision is emphasized when Leonardo wrote that "Painters often despair of being able to imitate Nature, from

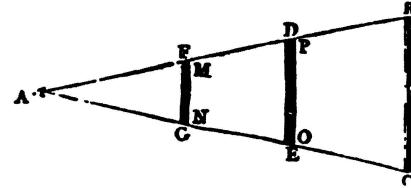
observing, that their pictures have not the same relief, nor the same life, as natural objects have in a looking glass, though they both appear upon a plain surface."

Two da Vinci drawings compare binocular and monocular viewing conditions. Leonardo champions the one-eyed viewing condition for painters when he writes that "It is impossible that objects in painting should appear with the same relief as those in the looking-glass, unless we look at them with only one eye." Lerner elaborates on the da Vinci drawings by commenting in a footnote that "Leonardo objects to the use of both eyes" by painters because "the visual rays proceed not from one and the same centre, but from a different centre in each eye." With such formulation, we see the creation of practical techniques to reduce the volumetric world of nature to a visual inference which can be depicted upon the flat surface of the canvas. This reductive inference, however, is not without serious limitations.

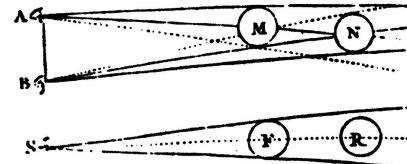
John White enumerates the practical difficulties of artificial perspective and its limitations. "Artificial perspective, can, in any case, take no account of the effects of normal, binocular vision," observes White, "and only by the provision of a peephole, or through the observer consciously closing one eye, can the system's fundamental assumptions be given practical reality." As a result, within the artificial system of perspective, a struggle for perceptual dominance can be observed. "It has been seen as a continuing tension between the artist's desire to portray the world of space in which he lives and his feeling for the individuality, and essential flatness, of the surface upon which he works. Sometimes the one, sometimes the other, seemed to be the more important."

2. Synthetic Depth on the Screen

"The space-time of the cinema is completely different. Spatially the screen shows us a flat world reduced to a single plane, lacking the basic dimension of depth, and limited by the frame which surrounds it. For much of its history the screen has



The monocular perspective as rendered by Leonardo Da Vinci.



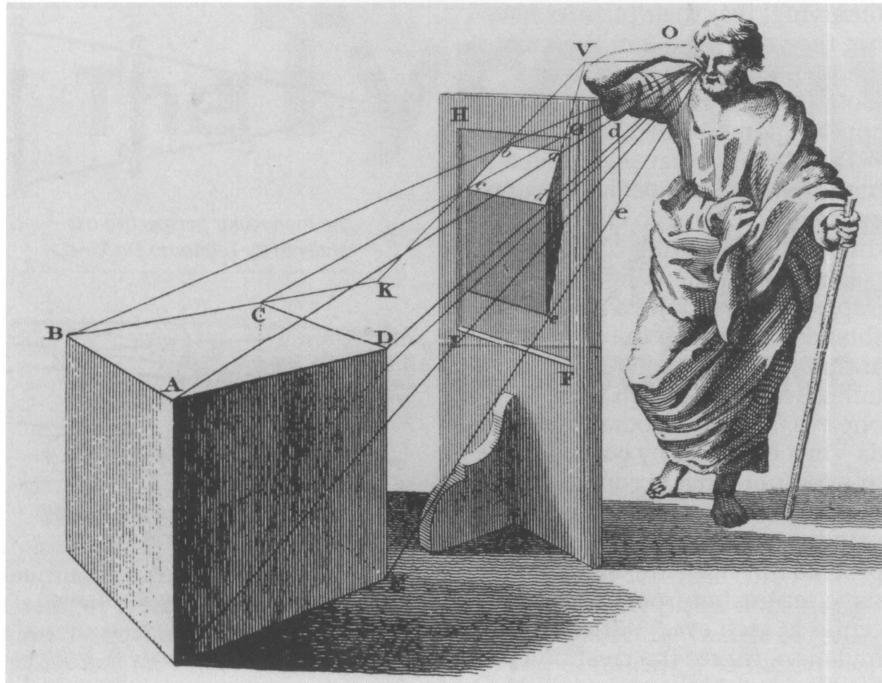
Da Vinci compares binocular and monocular vision.

been without any strong illusion of depth, and without colour."

-Ralph Stevenson and J.R. Debrix

Just like the painters of the Renaissance, filmmakers of the 20th and 21st centuries have had to create an illusion of depth on a flat plane. The primary visual grammar of the motion picture, in fact, has been built upon this fundamental defect of cinema. The motion picture image itself is highly artificial. "The camera lens is a crude device compared with the human eye, possessing neither its stereoscopic vision nor its power of continuously refocusing, changing angle, and accommodating itself to light," write Stevenson and Debrix in *The Cinema as Art*. "Because of this, and because of the nature of film projection, the cinema gives us, even visually, only an approximate and incomplete account of the real world."

From the earliest days of cinema, the creation of synthetic depth on the flat canvas of the motion picture screen was a persistent artistic strategy of filmmakers. Two common techniques in the early years used either subject motion towards the camera, (as with the Lumiere brothers' *L'Arrivée du Train* from 1895) or tracking and traveling camera shots (as with the "Phantom Ride" films of the novelty period up to 1905). Ivor Montagu, in his book *Film World*, enumerates both the importance of 3-D to early cinema and some of the strategies to mimic depth on a flat screen:



The Leonardo Window, a one-eyed system to render depth on a flat surface.

"Stereoscopy, like sound, has been associated with the idea of film from the start. Like sound, the idea of using it with motion pictures even widely antedates the mechanical achievement of cinema itself... Yet in this particular exploration, so far, the cinema has, perhaps, been least successful. There are familiar photographic means, connected with lens depth and focus, position of light sources, consequent position of shadows, etc., by which an illusion of depth can be created in a two-dimensional image. This illusion the cinema can enhance by moving the camera in relation to the objects photographed, to go round some of them, or past some of them..."

The various strategies for conveying depth on the flat motion picture screen by the 21st century have become so completely a part of visual storytelling grammar that the director and director of photography (DP) may have difficulty in adjusting to a new language. Typical techniques like rack focus can become problematic in stereoscopic filmmaking. As well, there are qualitative differences in viewing a 3-D movie using two eyes that set it apart from looking at a planar film on the flat screen. This new language of 3-D may certainly require some adjustments to the

storytelling language of cinema as stereoscopic filmmaking and exhibition, driven by digital technologies, becomes commonplace.

A significant part of the artistic adjustment necessary for the director and DP are a matter of changing emphasis with 3-D. Certain techniques for conveying depth on the flat screen, for example, will simply not work in 3-D. Scale as a transfer of dimension is one of them. Richardson and Debrix write that "in the absence of stereoscopic vision, distances away from the spectator are conveyed entirely by differences in size... Instead of seeing objects come nearer or go farther away, we get the impression that they are staying in the same place but increasing or decreasing in size." This is because, with 2-D cinema, "the third dimension of depth is interchangeable with the other two dimensions."

Thus far, cinema's defect of flatness has proved a virtue for art. "The distortions of perspective, the ambiguities of scale, the lack of a third dimension," write Richardson and Debrix, "are deplored only by uninspired artists. For filmmakers with real talent the spatial alterations, distortions and limitations inherent in cinema vision have been, as they are in painting, an opportunity to interpret reality in terms of a personal vision and

thereby more fully to express the artist's emotional experience."

3. An Art for Two Eyes

"After all, to those who have never seen stereoscopy, and whom habit has steeped in the vision of the two-dimensional image until its conventionality has dropped out of consciousness, the characteristic peculiarity of the two-dimensional film in contrast to other arts is its apparent pictorial reality."

-Ivor Montagu

The rendering of depth on a two-dimensional surface, art for one eye, is so much a part of visual culture that there has been great resistance on the part of artists, filmmakers and critics to the adoption of art for two eyes, the necessary condition for binocular stereopsis and the experience of a 3-D movie. How does the two-eyed viewing of a movie rendered in depth change cinema grammar? What artistic differences will storytelling in "Z-space" make to cinema itself? These questions are still being clarified today.

"I should not like to have to formulate theoretically, and without practical experience, the range of possibilities that exist in the stereoscopic film," writes Ivor Montagu. "There is so much that is unknown about both the appearance of the object portrayed and the reactions of the spectator."

Insights can be gained about transitional periods such as ours by examining previous technologies which disrupted cinema, like color. Writing in 1938, shortly after the widespread inauguration of three-strip Technicolor in motion pictures, Robert Edmond Jones, a stage designer and color consultant, wrote "The fact is that Hollywood has not yet begun to think in terms of color." When Jones uses the term "color," simply think "3-D" to fully grasp his prescience. "The color pictures now being made in the studios are not color pictures at all, in any real sense, but colored pictures," Jones observed, and "there is very little real color in these films and almost no color composition as artists know it. Black-and-white thinking still dominates the screen."

(Continued on page 35)

Studying "Snowflakes" in 3-D

(Continued from page 7)

characterize the other forms of crystals (Fig. 6).

Irregular snow crystals have been described with the light microscope as "...a lump of frozen droplets". However, the LTFESEM resolves them into clusters of very small three-dimensional hexagons measuring only 50 to 150 um (microns) across. Their length rarely exceeds their diameter (Fig. 7).

Snow crystals, which are formed by vapor deposition high in the atmosphere, occasionally come in contact with super cooled cloud droplets during their descent. When this occurs, the droplets adhere and freeze to the surface of the crystal. Crystals containing frozen cloud droplets are referred to as being rimed (Fig. 8). If this process continues so that features of the original snow crystal are no longer identifiable, the particle is referred to as graupel (Fig. 9).

Snow crystals do not retain their structural features upon reaching the ground and accumulating in

the winter snowpack. Alternatively they undergo a variety of changes depending on temperature gradients within the snowpack (Fig. 10). One of the most significant of these changes is the formation of depth hoar crystals (Fig. 11). These crystals form at the base of a snowpack when the difference between the ground temperature and the air temperature above the pack exceeds 10°C/m. Under these conditions, a heat gradient gradually moves through the snowpack from the ground to the surface of the pack. This process, which results in sublimation on the lower surfaces of the crystals and re-crystallization on the upper surfaces, eventually results in the formation of a layer of large depth hoar crystals at the base of the snowpack. If the accumulating snow is on an incline, the formation of a layer of depth hoar crystals at the base of the snow pack results in an unstable condition that ultimately cannot support the weight of the upper layers. This situation can

eventually result in a slab avalanche.

These are just a few examples of snow crystals that occur in nature and as the old saying goes "no two snowflakes are alike" has certainly proved true in our observations with low temperature field emission scanning electron microscopy!

William P. Wergin is a retired research scientist who worked for the Agricultural Research Service and cooperated with NASA and the University of New Mexico. Determining the structure of snow crystals and their subsequent structural changes that occur in the snowpack is helping scientists use remote satellite sensing to estimate the amount of water that is present in the winter snowpack. This information is not only valuable for agricultural purposes but is also used to predict flood conditions and assist with dam control. The author acknowledges Christopher Pooley for assistance in editing and formatting the figures. 



NSA and OSPS invite you to attend the

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Quaker Square Inn at University of Akron

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Sponsored by the Ohio Stereo Photographic Society and the University of Akron Department of Art, photography department. Registration is \$15 and is required to attend the Morning and Afternoon projection session. The evening session entitled "The Best of the Best" will be free. A Trade Fair and Exhibit Room will be open from 8 AM to 4 PM on Saturday in the ballroom next to the stereo projection room. There is no charge to attend the Trade Fair and Exhibits. Dealer tables are only \$25. We will be featuring everything 3-D from vintage stereo views to the latest stereo equipment and accessories, books, etc. For registration forms and more info go to www.3Dweekend.com or email John Waldsmith at vansywalsy@aol.com (330) 239-2212.

3-D Conversion of Satellite Water Vapor Imagery

by Charles J. McCreery

Three-dimensional viewing of paired aerial photographs has long been recognized as a valuable tool in interpretation of ground surface topographic features. From an airplane in level flight, overlapping camera exposures are made at intervals of several hundred meters. A pair of resulting photographs obtained at specific geometric angles are then viewed stereoscopically, revealing z-axis (depth) information due to parallax differences between near and far objects.

A similar approach has been attempted to image hurricanes and other large-scale atmospheric features from Earth-orbiting satellites. These efforts have largely been unsuccessful, because of movement of the atmospheric features during transit between the two satellite imaging positions, and because obtaining proper imaging geometry by this method is problematic.

"Artificial stereograms" were in use by 1980, which consisted of two-dimensional Landsat images converted to stereo using z-axis

data extracted from separate ground elevation surveys.

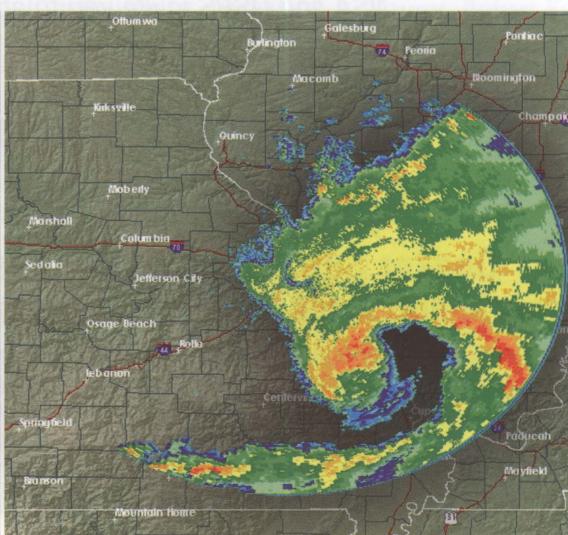
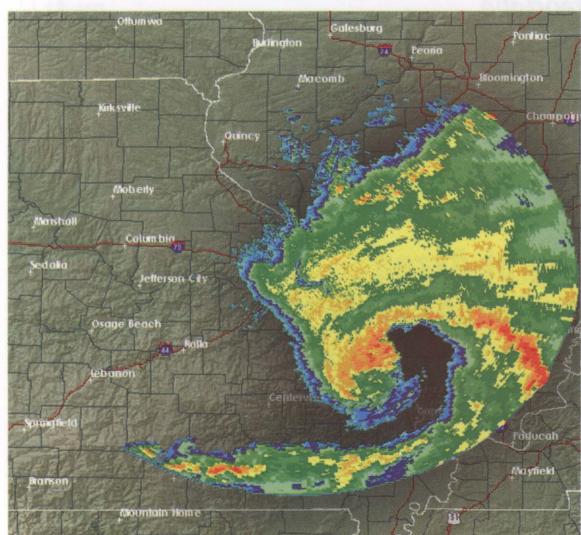
Now it is possible to extract z-axis information from any satellite image where an attribute (e.g. moisture content or cloud height) is coded using gray-scale or color, such as the Doppler radar image in figure 1. This image was converted to stereo by selecting and assigning a separate data layer to each of the 11 color (cloud height) values. Each layer is then shifted laterally to impart parallax and create the stereo effect.

For gray-scale images, such as satellite water vapor images, z-axis moisture content data are encoded into 256 or more values of gray, transitioning from black to white. When such a gray-scale image is converted to stereo in the manner of the Doppler radar image, at least 256 depth layers are possible.

Parallax shift can be introduced into a 2-D image using a "depth map" approach, with z-axis data obtained from a separate image file. The depth map format is normally a gray-scale image, where the gray value correlates to the amount of parallax shift.

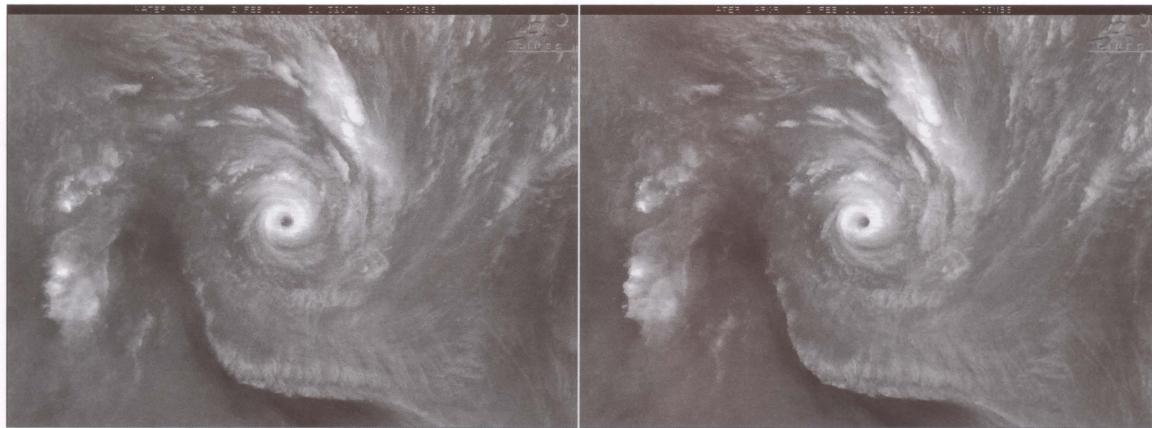
Because of this gray-scale format, the water vapor image itself can be used as the depth map. Application of the depth map to water vapor imagery sends dark tones to the background and light tones to the foreground, as in figure 2. The revealed atmospheric structure appears intuitive, because light shades on water vapor imagery generally represent rising moist air, and dark tones represent sinking dry air. The water vapor image is storing z-axis data that correlates to atmospheric processes.

The perceived structure in the images is described as intuitive, because the scientific community will need to validate the use of 3-D water vapor imagery for purposes of data analysis. 3-D conversion of satellite water vapor images is expected to benefit data analysis in at least two ways. When the gray-scale data are translated into apparent depth, small differences in value are more readily seen, and stereoscopic viewing of two similar but different images may result in an increase in the perceived signal to noise ratio, allowing very small features to be discerned.

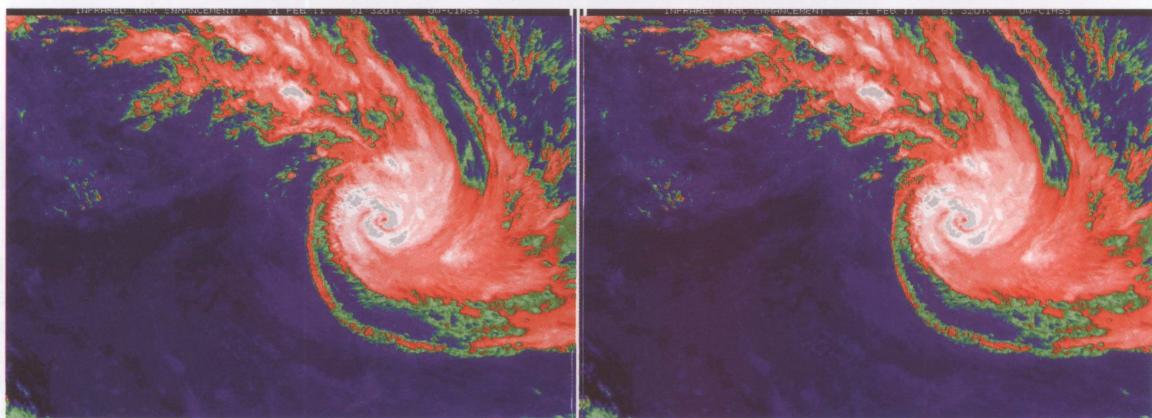


Doppler radar of tornado near St. Louis, Missouri, on May 8, 2009 at 12:22 CDT. 2-D image courtesy of National Weather Service.

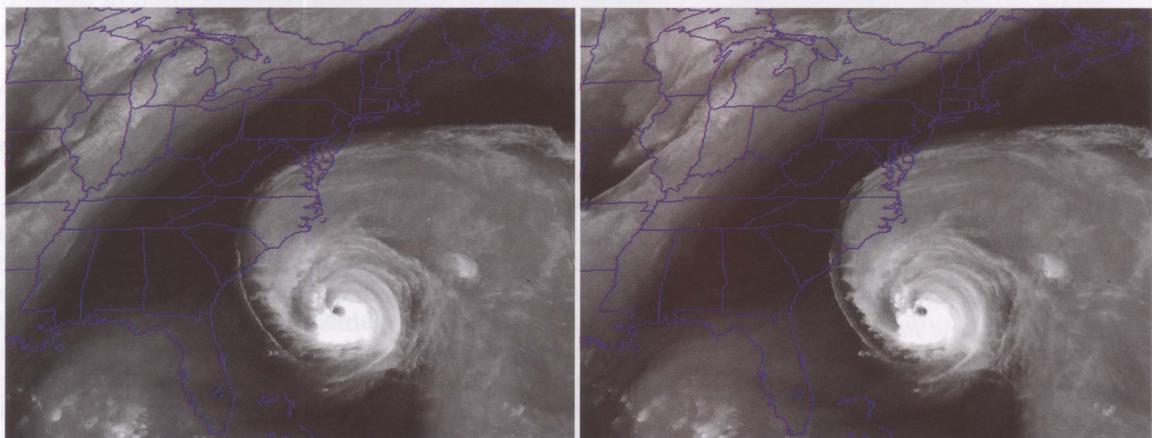
Water Vapor image of Cyclone Yasi, impacting Queensland, Australia on February 2, 2011 at 01:32 UTC. 2D- image courtesy of Cooperative Institute for Meteorological Satellite Studies, Space Science and Engineering Center, University of Wisconsin-Madison.



Infrared (NHC enhancement) image of Cyclone Atu, offshore Australia on February 20, 2011 at 01:32 UTC. 2-D image courtesy of Cooperative Institute for Meteorological Satellite Studies, Space Science and Engineering Center, University of Wisconsin-Madison.



Water Vapor image of Hurricane Earl offshore the southeastern US coastline on September 2, 2010 at 14:15 UTC. 2-D image courtesy of Space Science and Engineering Center, University of Wisconsin-Madison.



The z-axis data derived from the water vapor image may also be applied to other contemporaneous, similarly-scaled satellite images, such as the infrared (NHC enhancement) image in figure 3.

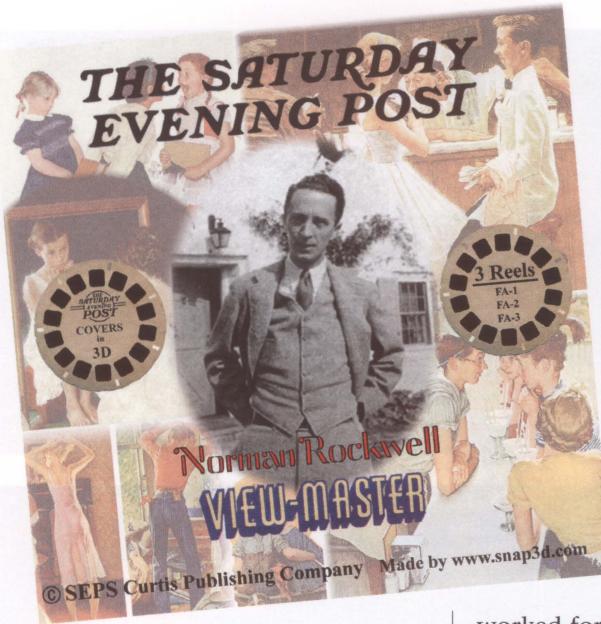
Experimentation with 3-D conversion of water vapor imagery by this author resulted in development of a new process which achieves similar results to the depth map method. This process allows flexibility that is not possible with the depth-map method, since the algorithm can be modified to deal with special situations. Z-axis data do not need to be in gray-scale format, and the algo-

rithm can ignore overlying text and map lines. This process is still in development, but the general concept is described below.

This process produces perceived continuous parallax using only a small number of layers, simplifying the algorithm for performing the 3-D conversion. For water vapor imagery, this process divides the gray scale into 16 layers. Each of the 16 layers includes center gray values that are evenly spaced across the entire gray scale. Each layer also includes a range of adjacent gray values about the center value. Each of the 16 layers is shifted laterally to achieve the desired

amount of parallax. Even though the parallax is imparted by shifting only 16 layers, the depth information in the image appears continuous. The stereo water vapor images contained in this paper were generated using such a 16-layer parallax shift.

Charles (Jay) McCreery holds a Master of Science degree in Oceanography from the University of Rhode Island, Graduate School of Oceanography, previously worked for Chevron, USA as an exploration geophysicist, has been employed by Clean Harbors Environmental Services for 23 years as a licensed professional geologist, and has been active in the field of stereo imaging since 1978.



Norman Rockwell was born on February 3, 1894. He transferred from high school to the Chase Art School at the age of 14 and went on to the National Academy of Design and finally to the Art Students League. His early works were produced for *St. Nicholas Magazine*, the Boy Scouts of America (BSA) publication *Boys' Life* and other juvenile publications. As a student, Rockwell was given smaller, less important jobs. His first major breakthrough came in 1912 at age eighteen with his first book illustration for Carl Harry Claudy's *Tell Me Why: Stories about Mother Nature*.

In 1913, the nineteen-year old Rockwell became the art editor for BSA's Magazine *Boys' Life* a post he held for three years. As part of that position, he painted several covers, beginning with his first published magazine cover, *Scout at Ship's Wheel*, appearing on the *Boys' Life* September 1913 edition.

Rockwell's family moved to New Rochelle, New York when he was 21 years old and shared a studio

Norman Rockwell – The Saturday Evening Post Covers in 3D

by Peter Sinclair, Snap 3D 2011.

Three-reel View-Master packet with 2-D to 3-D conversions of cover art from 21 issues of *The Saturday Evening Post*. \$19.75 US each + \$2 Shipping in North America and \$4 elsewhere. To buy a set and/or express interest in future sets, call 416-850-1972 or Email: info@snap3d.com. PayPal: sales@snap3d.com.

Norman Rockwell in View-Master 3-D

review by Wolfgang Sell

with the cartoonist Clyde Forsythe, who worked for *The Saturday Evening Post*. With Forsythe's help, he submitted his first successful cover painting to the *Post* in 1916, *Mother's Day Off* (published on May 20). He followed that success with many other cover illustrations and was published eight times on the *Post* cover within the first twelve months. Norman Rockwell published a total of 322 original covers for *The Saturday Evening Post* over 47 years.

The Saturday Evening Post was a magazine published weekly in the United States from 1821 to 1969 and monthly afterward by Curtis Publishing Co. The Post had fallen on hard times by the late Nineteenth Century. The new editor of the *Post* rebuilt it into the premier magazine of its time, publishing current event articles, editorials, human interest pieces, humor, illustrations, a letter column, poetry, single-panel gag cartoons and stories by the leading writers of the time. It was known for commissioning lavish illustrations and original works of fiction. Many of these illustrations were created by Rockwell.

Norman Rockwell was a prolific artist, producing over 4,000 original works in his lifetime. Many of these works capture glimpses of American Life of the day. One of his most notable was "Triple Self Portrait," a whimsical look at the artist himself.

NSA member Peter Sinclair (Snap 3D) has always held a deep appreciation for the works of Mr. Rockwell. Peter felt these works needed

to be presented in 3-D to see the true magic behind the illustrations. A wonderful 3-Reel packet is the result. The quality of the conversions is superb, and Norman Rockwell's paintings are always a fantastic and fun subject. Retired from his career at the Canadian Broadcasting Corporation, Peter's main interest is now focused on all things 3-D. He is particularly interested in preservation and presentation of interesting subject matter that has not previously been available in the 3-D format.

Norman Rockwell – The Saturday Evening Post Covers in 3D is an initial edition of 250 sets produced for Snap 3D by Alphacine (www.alphacine.com) on 3383 Kodak Vision 16mm Print Stock which has archival qualities close to Kodachrome. It should not go Magenta like Ectachrome reels of the 60s. Information on 3383 Film reads "Processed prints made on this film will show less than 10-percent image dye loss, even after several decades of storage at room temperature and 50-percent relative humidity." The information about the film chips is located at the following link:

[www.kodak.com/US/plugins/acrobat/e/n/motion/products/lab/h12383t.pdf](http://www.kodak.com/US/plugins/acrobat/en/motion/products/lab/h12383t.pdf).

Following a 3-D Rockwell photo, the converted images are titled "Sunset" (1926), "Check Up" (1957), "Girl at the Mirror" (1954), "Soda Fountain" (1953), "Before the Date" (1949), "After the Prom" (1957), "The Runaway" (1958), "Before the Shot" (1958), "Doctor and the Doll" (1929), "Happy Birthday Miss Jones" (1956), "The Art Critic" (1955), "Rosie the Rivet-

Norman Rockwell - The Saturday Evening Post Covers in 3D Reel FA3, Scene 1, "Triple Self Portrait" from Feb. 13, 1960.



Norman Rockwell - The Saturday Evening Post Covers in 3D Reel FA3 Scene 2, "Catching the Big one" from Aug. 3, 1929.



er" (1943), "Triple Self Portrait" (1960), "Catching the Big One" (1929), "100 Years of Baseball" (1939), "Bottom of the Sixth" (1949), "Weighing In" (1958),

"Weekend Travelers" (1948), and "Going and Coming" (1947).

If this project is successful Peter hopes to make additional sets for other Famous Artists such as

Renoir, Vermeer etc. He is always open to suggestions for interesting and exciting projects. This is a set you don't want to miss. ☺

The Tyranny of Flatness (Continued from page 30)

Similarly, even though new digital toolsets are driving production of stereoscopic motion pictures today, 2-D, or monocular, thinking still presides, a carryover from five centuries of visual thought. The great director Sergei Eisenstein believed that 3-D movies constituted a new language of cinema. Eisenstein also compared 3-D to the adoption of color. "As in color," Eisenstein wrote, "this new stage of color expressiveness in relation to the former pictures restricted by the white-gray-black palette—so here, in the first

instance, there only occurs a more perfect, continuing development of the tendencies towards the realization of which cinematography was striving already in the 'two-dimensional' period of its existence."

So disruptive is the two-eyed language of stereoscopic cinema that it could be thought of as a rip, or a tear, in the flat plane of the motion picture screen. And through this sometimes violently torn hole, a world going back in Z-space can be espied. Equally, violent apparitions sometimes tres-

pass this tear in the screen to invade the world space in which we live. New stories, new narrative vehicles await discovery for this canvas of Z-space. Eisenstein knew this well. "A place must be prepared in consciousness," he wrote, "for the arrival of new themes which, multiplied by the possibilities of new techniques, will demand new esthetics for the expression of these new themes in the marvelous creations of the future."

Continued on page 39

3-D Report from CES 2011

by Eric Kurland

For over ten years now, I have been attending the Consumer Electronics Show, held every January in Las Vegas. CES is a massive trade show where the electronics industry showcases all of the new products that will be available in stores over the next year. It's no secret that the trend in home electronics has been "3-D in the home" and this year's show was no exception.

More 3-D TV

Once again, practically every television manufacturer was demonstrating new 3DTV models. Sony, Samsung, JVC, Panasonic, Mitsubishi, LG, Vizio and Sharp were all showing the latest versions of their 3-D technologies. The majority of these TVs are flat-screen LCDs and use active shutter-glasses, which to my eyes create the highest level of ghosting due to crosstalk. As each manufacturer has their own proprietary glasses, I wasn't able to do any real comparisons of the amount of crosstalk in the glasses. Overall, I found most of the active LCD TVs to have unacceptable ghosting on shots with high positive or negative parallax. Several companies, including Panasonic and LG, also have active plasma displays, which do a much better job of reducing ghosting, and also reproduce better black

levels. Mitsubishi is the sole hold-out in the DLP TV market, and while the resolution is halved for each eye, I still find the DLPs to have the least amount of ghosting, and the highest quality image. LG and Vizio also introduced new lines of passive polarized TVs, which have the advantage of working with the same inexpensive circular polarized glasses used in many cinemas. While these micropolar displays also reduce the resolution in each eye by half, I found them to look quite impressive when viewed from the suggested distance of the home viewer.

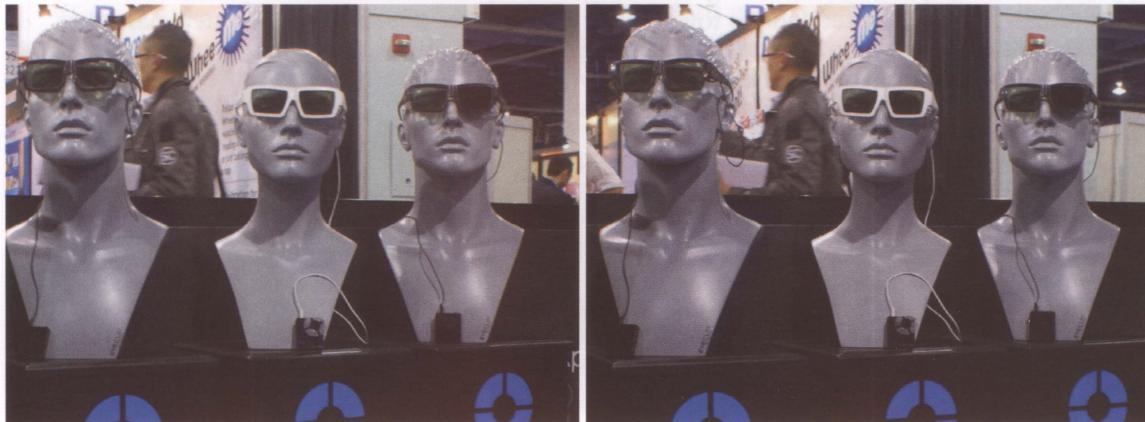
Several companies were also demonstrating experimental TV technologies that are not yet ready for commercial products, but may be in the future. Samsung announced a partnership with RealD to add z-screen polarization modulator technology to TV screens, allowing full resolution with passive glasses. They have developed a prototype, but it was not on the show floor.

Autostereoscopic Screens

Sony and Toshiba were both heavily promoting prototypes of autostereoscopic TVs. Typically, glasses-free displays suffer from resolution problems, as their screens need to be divided up among mul-

tiple views, rather than just left and right. These new multi-view sets use ultra high resolution displays to allow more pixels per view. Sony was even showing a 4K screen (that's 4096 pixels wide, over twice the horizontal pixels of a standard HDTV). Still, all of the autostereo TVs that I saw suffered from the problems of narrow viewing angles and limited "sweet spots", as well as not being able to represent negative parallax without a great deal of ghosting.

I did see several examples of single-user autostereoscopic displays that were impressive. One was a laptop with a barrier screen that utilises eye-tracking to shift the barrier with the viewer's head. This prototype, from the company Spatial View, was quite effective at eliminating the sweet spot problem. Spatial View also promoted their website 3DeeCentral.com which is designed to serve as an online source for 3-D content. Other small autostereo displays were shown by Master Image, who were showing their glasses-free screen for handheld devices. While large glasses-free TVs may not yet be ready for prime-time, the smaller personal screens, designed for one viewer at a time are set to make inroads.



Volfoni's Universal 3-D Glasses.
(Stereo by Eric Kurland)

Glasses Galore

I've written in the past about what I see as two problems with the current 3DTVs—the expensive proprietary active glasses that each manufacturer requires you to buy, and the lack of affordable consumer stereo video cameras to allow people to shoot their own content. This year at CES, both of these issues were addressed.

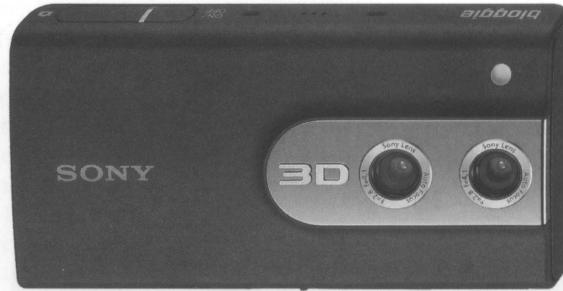
A number of companies have jumped into the fray, bringing third-party active and passive glasses to the marketplace. XPAND, 3DTV Corp., Bit Cauldron, Dyne Electronics, Blick, and Volfonni all announced or demonstrated universal active glasses, designed to operate with multiple brands of 3DTVs. Many of these glasses will be upgradeable—able to learn the infrared protocols of new TVs as they come to market, much like the universal remote controls available today. One company, Volfonni, has even developed a pair of lightweight glasses that are switchable between active and passive polarized, so that the same glasses can be used across displays, in movie theaters, and even as adjustable sunglasses (Full disclosure: I was hired to assist Volfonni during CES as a consultant, and handled many of the logistics of setting up their booth). There were also a number of glasses and sunglasses manufacturers showing new lines of designer passive glasses meant to replace the disposable plastic frames handed out at theaters. Oakley, Marchon, Gunnar, Blick, and Look3D were all displaying new stylish frames meant to allow theatergoers some choices other than the often derided "dorky" plastic glasses. A high-end optical company called iCoat was demonstrating their Sfirex polarized lenses, which claim higher light transmission and lower reflection than most typical passive lenses. I tried out the Sfirex glasses, and I must say that I was impressed.

Cameras

And then there are the cameras. Last year I complained that the only options for shooting 3-D, other than building your own rig, were the Fujifilm W-1, which was great for stills, but only shot stan-

dard definition video, and the announced, but not yet released at the time, 3-D cameras from Aiptek and DXG. 2010 finally did see the releases of the highly disappointing Aiptek and DXG models, and in addition, saw the Panasonic release of a camcorder with a 3-D lens attachment, and the Fujifilm upgrade to the W-3, which does shoot 720p HD video. However the big camera announcements were to come at CES. Panasonic is set to release two new camcorders that will be compatible with their previously released 3-D lens attachment. Panasonic also showed the new 3-D lens for their Lumix line of still cameras. Both of these lens attachments appeared to have very small fixed interaxials and only marginal image quality. Sharp Electronics demonstrated a new pocket-size 3-D camera based on their dual-lens module which will most likely appear in mobile phones. These cameras also did not appear to have the highest quality image, and the samples that I looked at suffered from severe vertical disparities, but these were not production models, so I'll reserve judgment.

Several other companies, including DXG, announced new cameras with higher resolutions, but the biggest news came from Sony and JVC, which both announced dual sensor full HD 3-D camcorders. The highlight at the Sony booth was hands-on access to their new pocket 3-D Bloggie camera, a low priced point-and-shoot "flip" style video camera that looks pretty interesting, and the new HDR-TD10, with a pair of 1080p sensors for shooting full HD 3-D in perfect sync. JVC announced a similar camera, the GS-TD1, which also claims two Full HD sensors, and will include a still photo and a time-lapse mode. The



Sony "Bloggie" 3-D camera. (Photo courtesy Sony USA)



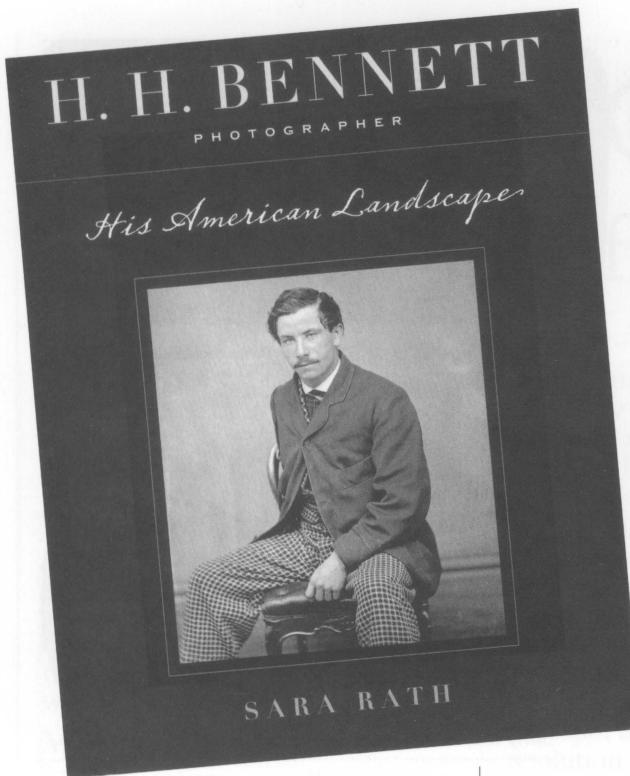
Sony 3-D Camcorder. (Photo courtesy Sony USA)



JVC 3-D Camcorder. (Photo courtesy JVC America)

Sony and JVC HD 3-D camcorders should be available mid-spring, and will cost \$1,500 and \$1,700 respectively. These two cameras, in my opinion, were the most exciting things on the show floor, as they will finally bring the possibility of high quality 3-D video production to the public.

There has been a lot of press lately regarding the lower than expected sales figures for 3DTVs during 2010, and the doom-and-gloom crowd is once again declaring 3-D dead. I wrote a year ago about my own observations after last year's CES, and predicted that sales would be disappointing as long as 3-D content was sparse, and consumers were not able to shoot their own 3-D videos. Hopefully, this year's crop of new gear will help improve the outlook for 3-D at home.



Readers who enjoyed the *Stereo World* feature "H.H. Bennett of Wisconsin" by Larry Hess in Vol. 18 No. 5 will find the story of the pioneering photographer and conservationist far more than just fleshed out in the new book *H.H. Bennett Photographer – His American Landscape* by Sara Rath. In fact, one of the sources listed for the Hess article was Rath's 1979 biography *Pioneer Photographer – Wisconsin's H.H. Bennett*, reviewed in *SW* Vol. 7 No. 4, page 21.

Much more is known about Bennett than most 19th century stereographers and publishers, thanks to the fact that his studio in Wisconsin Dells continued as a family operation for nearly 50 years after his death. New prints from his large format negatives were made in his darkroom, and stereoviews from his original stock were available at the counter until 1994 when the family donated the studio, image collection and both personal and business papers to the Wisconsin Historical Society. The facility is now a museum

H.H. Bennett Photographer – His American Landscape

by Sara Rath, Terrace Books - University of Wisconsin Press 2010. Paperback, 8x10", 286 pages, 180 photos. ISBN: 978-0-299-23704-2. \$24.95, <http://uwpress.wisc.edu>.

Bennett of the Dells

review by John Dennis

branch of the Society and can be seen at <http://hhbennettstudio.wisconsinhistory.org>. The thousands of negatives, 50 archives boxes, 37 file boxes, eight flat boxes, one tube, eight reels of microfilm and a tape recording provide

researchers with a gold

mine of material, much of which Rath has organized into a detailed and fascinating history of Bennett's life and work.

Bennett's 1886 design for a fast, action stopping stereo shutter made possible some of his most famous views, including "Leaping the Chasm" which captured his son Ashley in mid air between two high rocks in the Dells and his series of views showing lumber rafts plunging down the Wisconsin River through the Dells. (*SW* Vol. 21 No. 3, pages 4 and 6.) His famous revolving solar printing house, once located behind the original studio building, is now at the Smithsonian.

NSA members attending the 1994 convention in Milwaukee, WI were able to see many of Bennett's most memorable views projected in the Stereo Theater in a 40 minute show "The Artistry of H.H. Bennett" by Tim and Karen White. Most of the same images are reproduced in the book, although only a few as full stereos. A stereographic excursion to the Wisconsin Dells at the conclusion of the convention included a visit to the Bennett studio, where NSA members packed every inch of floor space in the museum/sales room.

The crowd slowly moved past exhibits of equipment and photos and peered into the open door of Bennett's still functioning "Oldest

Darkroom in America" but all movement stopped at the sales counter. There visitors poured through files of sample images to order mint stereoviews from Bennett's original stock. For collectors, this was a once-in-a-lifetime, almost time-warp experience and "sold out" tags soon replaced a growing number of views in the files.

Jean Dyer Reese (Bennett's granddaughter) and Oliver Reese of the Bennett Studio Foundation were on hand to relate stories about the stereographer from the central room of his studio, surrounded by his images and equipment. Intriguing as it was to hear stereoscopic history imparted in such a personal way in such unique surroundings, Rath's book provides much more in its 272 pages of carefully researched material on Bennett, from his 1857 arrival as a young teenager with his father in what was then Kilbourn City to the illness and injury he suffered in the Union Army to his entry into the portrait business after his return in 1865.

The evolution of his business into making and selling stereoviews of the Dells of the Wisconsin River is followed in detail along with his business and family relationships in the area that his views would help make a tourist destination. His intense fight at the opening of the 20th century to preserve the Dells from commercial development and a new dam at Kilbourn is documented in a chapter covering his efforts to explain to anyone who would listen how the Dells of the river with their miles of scenic rocks, inlets and caves were vital to tourism.

His fight against the dam failed, but despite the flooding of many lower elevation Dells wonders by

1909, his stereoviews and campaign to save the Dells helped inspire their eventual preservation from speculators and developers. As the NSA group realized during their 1994 boat tour, enough of the Dells remains above water to keep stereographers distracted for hours at a time. The submerged parts can at least be seen in Bennett's views and the story behind them can be found detailed in Rath's book.

H.H. Bennett Photographer – His American Landscape includes, among its 180 photos, 12 full stereoviews (reproduced at about 6.5" wide), and four stereo pairs printed directly from Bennett stereo negatives without transposing the images. This is a perfectly legitimate practice in books reproducing historical stereos from original sources, but note should be made in the captions that these pairs won't fuse with an ordinary viewer, which some readers less

than completely familiar with stereoscopic imaging might attempt. One can only wish this wonderfully impressive work about a major American stereographer had run more of his images in their intended stereo format. True, that could have led to an impulse to include a viewer—a rare feature among university press publications. Almost as if to taunt stereo enthusiasts and collectors, at least two captions for half-stereo enlargements mention how effec-

tive the images are when viewed in stereo, one praising "Bennett's genius for optimizing three-dimensional aspects."

Someday it would be satisfying to see a "picture book" featuring many more of Bennett's views as full stereos, printed at the quality of *A Village Lost and Found* and including an OWL viewer! But that would be recommended only as a companion to Sara Rath's book and certainly not in place of it. 

The Tyranny of Flatness

(Continued from page 35)

It is a future that is being written in the motion picture landscape today.

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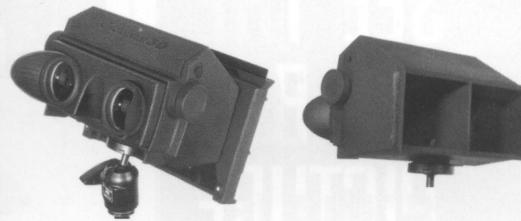
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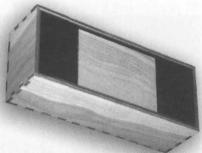


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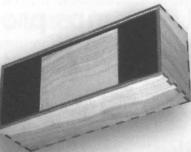
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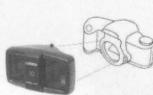
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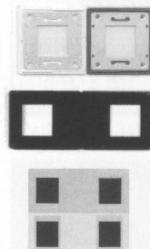


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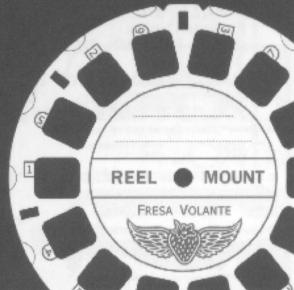


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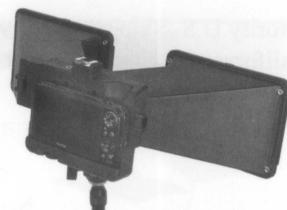
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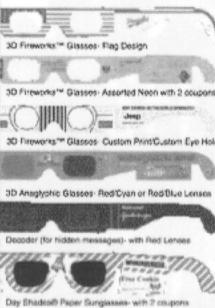
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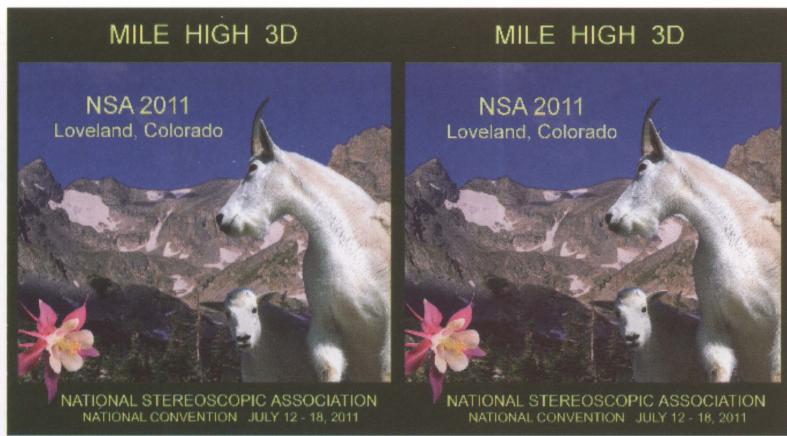
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- Large centralized, open atrium facilitates ample opportunities for mingling with fellow stereo enthusiasts!
- Excursions of variety for site-seeing, photo opportunities and fun! 14,000ft Rocky Mountain peaks, Colorado wildflowers, Brewery tours, Sculpture Foundry and Garden, Miniature Trains, Atlas Missile Silo, Amusement park and Indoor Cliff Divers!

A few changes to registration... we decided to save some trees and money this year by not printing out the 21,000 pieces of paper for inclusion in Stereo World. We have reduced the registration insert to only 6 pages instead of 15 and request that you access the convention website to print out the additional registration forms that apply to your specific needs at www.stereoworld.org/2011. If you don't have internet access or prefer to complete the forms on our paper, simply call us at 970-221-3923. Thanks for supporting this change!

Join us for some 3D Heaven in 2011!

www.stereoworld.org/2011

